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ABSTRACT

The first in a series of seven booklets on physical education and recreation for the handicapped provides information on activities and teaching methods. Teaching techniques concerning motivation, program planning, and group organization are considered. A bibliography lists approximately 50 references on teaching such activities as archery, bicycling, baseball and gardening. A section on meeting individual needs deals with adapting activities and skill training for specific disabilities. A resource section includes an annotated listing of 35 films and 20 periodicals. Reprints of 16 articles on such topics as teaching playground skills to severely retarded children and bowling for the handicapped are also included. (CL)

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EC

Physical Activities

For

Impaired, Disabled, And Handicapped Individuals

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PHYSICAL ACTIVITIES FOR IMPAIRED, DISABLED AND HANDICAPPED PARTICIPANTS

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February 1976

INFORMATION AND RESEARCH UTILIZATION CENTER IN PHYSICAL EDUCATION AND RECREATION FOR THE HANDICAPPED

Sponsored by American Alliance for Health, Physical Education, and Recreation
Unit on Programs for the Handicapped
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Washington, D. C. 20036

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ACKNOWLEDGEMENTS

This packet was prepared by Linda Tibaudo, Graduate Intern in Physical Education and Recreation for the Handicapped: Information and Research Utilization Center (IRUC). Systematic search of many different sources was conducted in gathering information for this packet on activities for use in physical activity and recreation programs for impaired, disabled, and handicapped individuals. Selection was based on types of requests received by IRUC and discussions by staff with many different personnel in the field. Teachers, leaders, and parents continually seek new and innovative ideas to incorporate, adapt, or modify for their own programs and methods. Review of activities and methods presented in this packet should stimulate and motivate readers to try new approaches in apparently unrelated areas.

Contents of this packet are practical, tested, and appealing to children of all ages; they are appropriate for and can be used in either regular or special program settings. Discriminating selection and use of these materials can be effective in providing opportunities by which better two way communication, appreciation, and understanding between individuals with various handicapping conditions and able bodied persons result. Special and additional thanks, appreciation, and a hearty well done are further extended to Linda Tibaudo. Major benefactors of this effort will be countless impaired, disabled, and handicapped boys and girls, young men and women, who will have opportunities for enriched experiences leading to a higher quality of life through active participation in physical and recreational activities.

It is to the end of improving and enriching such opportunities in all aspects of physical education, recreation, and related areas for everyone, regardless of presence, type, or severity of handicapping condition that these materials and their use are dedicated.

Julian U. Stein
Director, IRUC

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PROJECT NO. 447AH50022

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This is the Way Fun is Going to Be (author unknown)

OVERVIEW

Play can be characterized as behavior in which the participant is freed as far as possible from any imposed constraints or expectation to ellicit specific responses. Play allows for optimum exploration of the unknown and is predictable to the extent that each participant is free to respond in his or her own way. Play encourages creativity and develops the capacity to generate new and unexpected responses to new situations. To gain the most from play, however, individual freedom and self-regulation must be present.

Materials on selected physical activities applicable to and appropriate for participants with a variety of handicapping conditions provide information for physical educators, recreation personnel, volunteers, parents, and other interested persons planning and/or conducting individualized or group activity programs for impaired, disabled, and handicapped participants. Descriptions of specific activities include modifications for participants with varying degrees and types of conditions. Methods, equipment needs, adaptations, and physical lay-outs comprise a major portion of the guide. Rehabilitative, developmental, and competitive aspects of activity for impaired, disabled, and handicapped persons are discussed.

An extensive annotated bibliography describes periodical materials compiled. Many references have been extracted from easily obtainable journals. Those which are less accessible are available, as are all listed materials through the Information Research and Utilization Center for Physical Education and Recreation for the Handicapped for minimal reprinting and postage fees. The article, its description, and the number of pages are listed in the bibliography.

Examples in the adaptation of activities for a variety of handicapping conditions is also included. Activity programs for the impaired, disabled, and handicapped have been initiated throughout the nation; however, there is limited literature available to provide guidance. The materials compiled in this information guide are meant to provide an instructional basis for effective implementation in activity design.

INTRODUCTION

The Information Research and Utilization Center for Physical Education and Recreation for the Handicapped (IRUC) has just completed three years of operation as a demonstration project supported by the Bureau of Education for the Handicapped, U. S. Office of Education, Department of Health, Education and Welfare. A major purpose of this project was to collect, review, package, develop, and distribute information and materials about physical education, recreation and related areas for impaired, disabled, and handicapped persons.

Individuals working with the disabled are alerted to the new direct information service provided by IRUC. Expansion from a referral service to a direct information service establishes IRUC as the most comprehensive resource for groups and individuals seeking information on physical education and recreation for the handicapped.

This Activities Information Guide is the first of a series of monthly packets containing the latest information concerning physical education, recreation, sports, and related activity opportunities for impaired, disabled, and handicapped individuals.

This activities guide is designed to include an update of information and materials regarding a variety of activities tailored to a variety of disabilities. Bibliographic information consisting of recent articles, films, and fugitive materials has been compiled. The bibliographic materials have been catagorized into activity strata. Charts depicting the disability, a certain activity is best suited for, and those it can most readily be adapted to have been developed. Psychological, social, and physical skills and concepts best developed by a certain activity are also depicted graphically.

Relevant articles, selected for their practicality and uniqueness, have been reprinted. Bibliographic information is listed to enable the resource contact to obtain information on his own.

Audiovisual items such as films, loop films, film strips, slide programs and video tapes are listed and available to rent through IRUC. Teaching techniques have been included, as have several sample activity adaptations.

The value of this guide lies in the application of information towards activity programs for the handicapped.

PUT IT TO GOOD USE!

SELECTED TEACHING TECHNIQUES

The following list of selected teaching techniques is not complete. Sound instruction of physical education employs the same sound teaching methods generally accepted in all areas of education. This listing includes those techniques which, in most cases, are particularly relevant to effective instruction of physical education with handicapped individuals. These suggestions are concerned with motivational factors, effective program planning, and group organization.

- Progress slowly, offering familiar activities first. Use repetition because these students need reinforcement of learning.
- Introduce new activities during the early part of period before the group gets tired.
- Be clear in directions without talking down to the group.
- Use concrete examples.
- Sell yourself to your students before attempting any formal teaching.
- Be kind, firm, using a positive approach.
- Do not touch the student unless you have told him what you plan to do.
- Educational principles of effective teaching and learning are applicable to the retarded and should be utilized, for instance, from the known to the unknown and from the simple to the complex. Both conceptual understandings and skills should be considered. Motor development should proceed from gross to find movement and from trunk movement to movement of the extremities. Methods of motivation should be basic to any activity program: conventional methods of verbal praise and acceptance, praise based on improved performance, and operant conditioning. Instructor enthusiasm and participation are keys to pupil enthusiasm and participation.

- A maximum number of stimuli should be used in teaching a basic movement skill. It is doubtful that the entire range of stimuli would be practical, but those which can contribute successfully to understanding and performance on a given level should be used.

  Manual manipulation--guide body parts through desired movement to result in a proper response. This gives participants the feel of the action and can do much to alleviate the initial fear so often shown by impaired, disabled, or handicapped persons to a new skill or activity.

  Coaction--feel general or specific movement patterns by placing hands on parts of the body of an individual, mannequin, or doll going through desired movement patterns.

  Tactile--use touch to relate more effectively to the child what part of the body is to be used. This is an effective means of reinforcing other stimuli.

  Visual--use of visual aids in combination with other stimuli (i.e., slides, diagrams, demonstrations, pictures, films, mirrors). Caution should be exercised in the use of mirrors involving left and right concepts because of the reversed reflection.

  Verbal--oral instructions. An awareness of the language understanding level of the child is necessary. Sometimes a concept is understood but is eclipsed by unfamiliar terminology. For instance, a child may not comprehend the term "every other", but may comprehend the synonymous phrase "every second".

  Abstract--use of signals, signs, and words which must be received and interpreted prior to reaction by the student.

- Work on a ratio of one instructor (or aide) to one trainable student. Educable students might have a ratio of one instructor to 3 or 4 students.

- Games and activities should be selected for their recreative value as well as their physical, social, or mental value.

- Offer activities which could be useful at recess time, after school hours, and later on in life.

- Select group games which involve a maximum of activity for players simultaneously. Relay teams should have few members (4-6). Children lose interest if they wait too long for a turn.
- Attempt to keep each child active.
- If discipline is a problem, it is probably that the game is too difficult to understand, requires too much skill, has too many rules, or has too many verbal instructions.
- Learn as much as possible about the students before the first class period.
- If children lack interest in an activity, do not insist they play it.
- Give the children goals in which they can have some measure of success, and use praise as often as possible.
- Change the activity when interest is at its peak.
- Base activities upon the needs and readiness of the various age groups.
- Select games which are within the skill range of the students. Take nothing for granted where movement is concerned.
- Give as few rules as necessary to start the game. Introduce new rules in the "play" situation.
- Keep the fun in fundamentals. Use a game approach to teach the fundamentals.
- To assure comparable team ability, the instructor is the one best suited to select teams in games requiring skill.
- Let children compete with themselves.
- Teach rules which may be modified, but not changed. For example, hitting a player below the waist with the ball in kickball detracts from its value as a lead-up to softball.

- In teaching a circle game, the instructor should stand as a member of the circle. Always be in view to all students.

- Demonstration will be more effective than verbal explanation.

- Children are usually great imitators. Teach by indirection as well as by direction.

- All boundary lines should be marked and equipment on hand prior to teaching and activity.

- The chronological age of a child must not be insulted.

- A few common positive signals or commands should be understood by all children (clapping hands, whistle, etc.)

- Realize that problems are not always what they most obviously seem. A child's inability to catch a ball may be due to visual problems rather than lack of coordination or fear of being hit.

- Provide opportunities for student selection and suggestion of activities occasionally.

- In programming, the instructor must be cautious not to plan programs based on his own interests and abilities, or the interest and abilities of normal children of comparable age.

- Variation of activities should be planned to provide for vigorous physical activity daily.

- Maintain a balance between vigorous activities and less demanding activities; plan for change-of-pace activities especially for those with serious physical or mental defects.

- Be attuned to laughter and excitement. These are good measurements of enjoyment.

- It is important that the instructor have an accurate and indelible visual image of the desired skill. He must transmit this to the learner through demonstration and appropriate audiovisual aids, bringing into play as many senses as possible.

- The instructor must guard against working on more than one aspect of a skill at a time. By concentrating on a single phase of the skill, the participant can place all of his mental efforts into performing this act; he is more apt to experience success and is less likely to become confused and fail.

- Review skills learned during the previous periods before introducing new skills.

- Base new activities on previously learned experiences, whenever possible; avoid presenting too many ideas too quickly.

- Give each student an opportunity to demonstrate some skill or skills to the remainder of the class. This will be a source of much satisfaction to the student and may motivate others to work harder.

- Selection of activities should be based upon the individual's ability, level of proficiency, and personal need. Mental age, background, and previous experience in the activities will help give valuable clues in selecting activities appropriate for the individual. Activities offered should provide greater challenge than had been expected in the previous lesson. The guides must be in success, enjoyment, and learning experienced by the participant.

- Focus on participation, learning, and experience in games, relays, and contests--winning is not the major goal.

- Think in terms of experience and participation for each individual. Consider the individual handicap in terms of how it affects teaching methods and approaches.

- Keep a daily record of each child's participation and progress.

Classroom teachers, special educators, parents, and recreation personnel will be interested in these contributions of a remedial physical education program. Small and large steps in terms of physical, emotional, and social improvement have been noted in work concerning the multiply handicapped, trainable mentally retarded, visually impaired, and hard of hearing.

Multiply handicapped children participate in activities to develop basic movement skills. A great deal of individual help is given each child. Rolling and pushing balls, balancing, rhythms, tumbling, trampoline, crawling, and parachute play are representative of activities that have been successful with these children. Great emphasis is placed on trying to get children to play with and relate to one another.

Successful with multiply handicapped include--

- Have children sit down and hold hands; stand and hold hands, walk and continue to hold hands; add variations and let children devise their own activities--even simple activities.

- Simple exercises in which volunteers or assistants demonstrate and/or more children through various patterns and routines.

- Place children in a circle and roll a plastic ball to them as a first step in a throwing/catching sequence; after rolling, toss or throw ball with two hands from different positions (sitting, stooping, standing) and with underhand and overhand motions.

- Have children lie on their stomachs in a circle and hit a beach or plastic ball back and forth.

- Use a large punch type heavy duty balloon in various activities and from different positions.

Orthopedically handicapped children engage in activities such as modified softball, volleyball, archery, basketball, tumbling, trampoline, parachute play, and other individual and group games. Every effort is made to keep activities as nearly normal as possible.

Other activities and approaches for orthopedically handicapped include--

- Use bean bags, balloons, or balls for Follow the Leader for youngsters to react quickly to visual stimuli; encourage cerebral palsied children to do what they can, each at his own speed and in his own way; let all children have opportunities to serve as leaders.

- Play catch with bean bags and bleach bottles with bottoms cut out as catcher; have teacher catch, if necessary with youngster taking bean bag and throwing it back to the teacher; pair youngsters and let them work together, gradually moving farther apart as skill and confidence improve.

- Use plastic bat and ball; where necessary allow children to be pushed in wheelchairs and hit from a batting T to modify softball and related lead-up activities.

Trainable mentally retarded children participate in a variety of activities according to their developmental, functional, and mental ages. Formal calisthenics and structured exercises have been popular and enjoyed by these youngsters. Whenever possible exercises are made into games and other types of fun activities. Rolling, tumbling, trampoline, low organized games, obstacle courses, inner tube rolling, throwing, jumping, hopping, and running activities are all incorporated into programs for TMR.

Additional activities for TMR include--

- Increase balance ability with balance beams, balance boards, jumping and hopping in and out of boxes, and alternately lifting one foot and then the other from the ground.

- Make exercises into games incorporating animal walks, appropriate moving objects such as flying birds, trees swaying, seeds growing, airplanes flying, rockets blasting off, horses prancing.

- Include relays of rolling tires or inflated inner tubes or pushing medicine balls; use bicycle tires individually or with partners for mirror progressions; tug, pull, jump into and out of, run inside tires of all sizes and descriptions.

- Introduce games such as Duck-Duck-Goose, Steal the Bacon, Drop the Bean Bag, Swat Tag along with other low organized games, specific lead-up activities, and individual and team sports.

Visually handicapped youngsters take part in activities according to their functional vision and how well each can see in his environment. Many legally blind participate in most gross motor activities with physical and visual accuracy. Activities such as follow-the-leader (mirroring), tumbling, movement exploration, balance beams and boards, trampoline, obstacle courses, parachute play, running relays, and kickball are all part of physical education for visually handicapped.

Typical activities and approaches for visually handicapped include--

- Use large yellow plastic balls or one that make sounds for ball games and for teaching throwing and catching.

- Place youngsters with greatest visual impairment close to teacher to ensure that all can see what is expected; guide them through movements or patterns so they get feel of exercise, skill, or activity.

Hard of hearing children need to receive work on posture, balance, and body awareness. Balance beams and boards and jump boards are used to improve kinesthetic awareness and balance. Activities such as relay races, softball, volleyball, tumbling, trampoline, archery, parachute play, exercises, and calisthenics are adapted according to age and ability level of each child.

Sample activities and methods for hard of hearing include--

- Use mirror games where one person does an activity and the class follows; do these with exercises, balls, bean bags, wands, or bicycle tires to develop the all important eye contact needed so desperately by hard of hearing.

- Provide opportunities for vigorous physical fitness activities through exercises, calisthenics, running, resistance (weight) programs, and relays.

- Promote balance and kinesthetic awareness through exploratory activities, circuit training, and obstacle/confidence courses.

Teaching suggestions developed by a group of teachers, students, and aides, who worked extensively in a tunnel activity project with educable mentally retarded and educationally handicapped children--

- Hyperactive children need definite boundaries and some structure in games and related activities to help them develop control of body movements in limited areas.

- Skill sequences and activity progression have to be broken into small steps to ensure success and build confidence.

- Many EMR children--IQ 50-70--function as well, if not better, in games, sports, and athletics than non-retarded. However, many retarded have other hang-ups such as social adjustment problems, emotional overlays, and psychological problems; some are easily distracted, hyperactive, or have difficulty in remembering sequences.

- Many simple activities--such as the fun tunnel--can be used as effective tools to motivate and communicate with these children. Tunnels can decrease a child's fear of closed places; many children will go through tunnels because of peer support and encouragement.

- Facial expressions and body movements are tip-offs to what a child will do next.

- Self-awareness can be improved with tunnels. Children have better concepts of their own heights; a greater awareness of their extremities, where the hands and feet are while crawling, how the body follows the head in movement, and position changes of legs and arms; more indication of the location sense and how the body fits in and out of objects.

- Attention span can be developed as children focus attention on a single task and block out all external distractions while crawling through tunnels.

- Instructors, teachers, volunteers, parents--all who deal with these children--must learn when to confront them with reality and when to say nothing; they must learn how much protection to give children without fostering unhealthy dependence.

Skill and Concept Development Chart

SKILLS AND ACTIVITIES	Direction	Intensity	Formation	Self Awareness	Speed	Space	Ball Rolling	Ball Bouncing	Throwing	Catching	Dodging	Kicking	Striking	Batting	Locomotion	Balance	Perception	Throwing Underhand	Throwing Overhand	Object Handling	Running	Pushing	Rolling	Bowling Lead-Up	Soft-Ball Lead-Up	Base Running	Golf Lead-Up	Depth Perception	Size
Archery	x		x	x		x											x			x								x	x
Activity Day	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
Arts and Crafts		x	x	x																x								x	x
Painting	o	x	x	x		x														x								x	x
Printing	o	x	x	x																x								x	x
Shapes	x	x	x	x		x														x								x	x
Balloon Play	x	o	o	x	x	x	o	o	x	x	x	o	o	o	x		o	o	o		x		x	x	o			x	x
Baseball	x	x	x	x	x	o	o		x	x			x	x			x	x	x	x	x	x			x	x		x	o
Bean Bag	x	o	x	x		x			x	x	x						x	x	x	x								x	x
Bicycling	x	x	x	x	x	x					x				x	x	x			x								x	o
Blowing Game	x	x				x	x	x								x	x					x	x					x	
Bowling	x	x		x	x	x	x									x	x	x		x		x	x	x				x	x

X - Skill is basic objective of activity

O - Adaptation of activity will develop skill

SELECTION CHARTS

Skill and Concept Development Chart

SKILLS AND ACTIVITIES	Direction	Intensity	Formation	Self Awareness	Speed	Space	Ball Rolling	Ball Bouncing	Throwing	Catching	Dodging	Kicking	Striking	Batting	Locomotion	Balance	Perception	Throwing Underhand	Throwing Overhand	Object Handling	Running	Pushing	Rolling	Bowling Lead-Up	Soft-Ball Lead-Up	Base Running	Golf Lead-Up	Depth Perception	Size
Camp Activities	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Croquet	x	x	x	x	x	x	x						x			o	x			x		x	x				x	x	x
Games	x	x	x	x	x	x	o	o	o	o	o	o	o	o	o	x	x	o	o	o	o	o	o	o	o	o	o	x	x
It All Adds Up	o	x	x	x		x											x											x	x
Think	x	x	x	x	x	x										x	x											x	x
Gardening	o	x	x	x		x											o					o						x	x
Putt-Putt Golf	x	x	x	x	x	x							x		x	x	x			x		o	o				x	x	
Indoor Target Golf	x	x	x	x	o	x	x						x			x	x			x		x	x				x	x	x
Gross Motor	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					x	x
Balance Board	x	x	x	x		x										x	x											x	x
Multi-Carpet	x		x	x		x						o			x	x					o	o	o					x	
Rope Skip					x	x	x								x	x												x	

X - Skill is basic objective of activity

O - Adaptation of activity will develop skill

Skill and Concept Development Chart

SKILLS AND ACTIVITIES	Direction	Intensity	Formation	Self Awareness	Speed	Space	Ball Rolling	Ball Bouncing	Throwing	Catching	Dodging	Kicking	Striking	Batting	Locomotion	Balance	Perception	Throwing Underhand	Throwing Overhand	Object Handling	Running	Pushing	Rolling	Bowling Lead-Up	Soft-Ball Lead-Up	Base Running	Golf Lead-Up	Depth Perception	Size
Sock-It Block-It	x	x	x	x	x	x	x	o	o	o	x	o	x	o		x	x			x		o	o	o				x	x
Hiking	x	x	x	x		x									x	x	x												
Innovative Activities	x	x	x	x	x	x	x	x	o	o	o	o	o	o	o	x	x	o	o	x	o	o	o	o	o	o	o	x	x
Alley Games	x	x	x	x	x	x	o	o	o	o	o	o	o	o	o	x	x			x								x	x
Materials Manipulative	o	x	x	x		x											x			x								x	x
Milk Cartoons			x	x		x						o	o	o			x			o	o	o	o	o	o	o	o	o	o
Dressing Up				x																									
Jogging	x	x		x		x											x				x					x		x	x
Parachute	x	x	x	x	o	x	o				o				o	o	x			x								x	x
Play Cards	o			x													x											x	x
Ropes	x	x	x	x	x	x									x	x	x			x								x	x
Sandbox Play			x	x		x											x											x	x
Swimming	x	x	x	x	x	x	o		o	o	o	o			x	x	x			o								x	x
Table Tennis	x		x	x	x	x		x					x	o	o	o	x			x								x	x

X - Skill is basic objective of activity

O - Adaptation of activity will develop skill

SELECTION CHART

Activity Adaptation Chart

Disabilities	Activity Day	Alley Games	Archery	Arts and Crafts	Balance Board	Balloon Play	Baseball	Bean Bag	Bicycling	Blowing Game	Bowling	Camp Activities	Croquet	Games	Gardening	Gross Motor	Hiking	Indoor Target Golf	It All Adds Up	Innovative Activities	Jogging	Material Manipulative	Milk Carton Dressing Up	Multi-Carpet Act	Painting	Parachute	Play Cards	Printing	Ropes	Rope-Skip	Sandbox Play	Shapes	Sock-It; Back It	Swimming	Table Tennis	Think
Auditory Impairment		x	o	o	o			x	x		o	o	x	o	x	x	x			o		o	o	o	o	x	x			o			o	x	x
Emotionally Disturbed		x	o	o	o			x	x		x			o	x	x	x			o		x	x	o	x	x	x	x		o		x	x	o	o	
Learning Disabled		x	o	o	o						o			o	x	x	x		x	o		x	x	x	o	x	x			x		x	o	o	x
Multiply Handicapped	x	x	x	o				x			x	o		o	x			x		o		o	o		o	o	o		x		x	x		o	x	
Mentally Retarded	o	x	o	o	o	x		x	x		x	x	x	o	x		x	x	x	o		o	o	x	x	x	x		x	x	x	x	x	x	x	x
Orthopedically Impaired	x	x	x	o		x		x			x	o	x	o	x			x	x	o		o	o		o	o	o		x		x			o	x	x
Visually Handicapped		x	x	o	o		x				x	o		o	x	x	x			o	x	o	o	o		x				o	x			o	x	
Asthmatic		x		o	o				x	x	o			o						o		x	o	o	o	o				o				o		
Autistic		x		o							o	o		o						o		o	o		o	o								x	o		
Aged				o	o						o				o	x				o				o	o		o	x		o				o	o		
Epileptic					o				x		o			o						o	o	o	o	o	o	o				o				o			

x - Activity Developed for
o - Adaptable

ACTIVITIES BIBLIOGRAPHY

The following materials have been thoroughly reviewed and included in this activities bibliography because of their useful approach. Each article actually describes the activity, and in most cases, provides instructions for practical use.

The sources are listed by the activity they are dealing with. The title of the article, author, and publication it appears in is listed for personal research. The exact number of pages has been included should a reprint be desired. Some of the material is less accessible than others. Reprints can be purchased from IRUC.

Archery

Hyman, Dorothy. "Teaching the Blind Student Archery Skills." The Journal of Health, Physical Education, and Recreation, 40 (April 1969): 85. (1 page)

Presents an instructor's adaptation of archery for a blind student at the college level; emphasizes gaining self-confidence as well as skill.

Pettit, Milton H. "Physical Education for Orthopedically Handicapped Children." Journal of Health, Physical Education, and Recreation, 42 (February 1971): 75-77. (3 pages)

Deals with physical education for orthopedically handicapped children; describes a program in archery offered in a special school, and an activity day in which orthopedically handicapped children participated.

Activity Day

Pettit, Milton H. "Physical Education for Orthopedically Handicapped Children." Journal of Health, Physical Education, and Recreation, 42 (February 1971): 75-77. (3 pages)

Describes structured program of competitive indoor and outdoor activities at Cypress Orthopedic School (Ontario, California); outlines organizational procedures, activities, and administrative considerations for annual activity day.

Arts and Crafts

Jones, Don L. "Ten Uses of Art Activity in Treatment." Motive, 19:2 (n.d.): 29. (1 page)

Discusses art activity as an important tool in hospital treatment that is best used in conjunction with the rest of the adjunctive team. As the functional use of art becomes better understood, art activity can be expected to have wider and greatly enlarged therapeutic application. Explanation and definition of ten specific values of painting are listed.

Merril, Dorothy. "Fun Stuff." The Exceptional Parent, 5 (March-April 1975): 52-53. (2 pages)

Depicts printing for fun using many different mediums. Several recipes for homemade inks and inkblocks are given and examples for implementation shown.

*"Ideas From Our Readers." Best of Challenge, II. (November-December 1970): 12-13. (2 pages)

Gives instructions for several arts and crafts projects which have been found to work well with mentally retarded individuals, including severely retarded adults.

*Stoller, Neil. "Shape-Up." Best of Challenge, II. (September-October 1972): 49. (1 page)

Presents shape activities used successfully in New York City public schools with educable mentally retarded boys and girls 7-12 years of age and trainable mentally retarded children 10-16 years of age. Variation of shape activities have been introduced using colors, numbers, letters, and words. An outline of the approach utilized is given.

Puthoff, Martilu. "New Dimensions in Physical Activity for Children with Asthma and Other Respiratory Conditions." Journal of Health, Physical Education, and Recreation, 43 (September 1972): 75-77. (3 pages)

Blowing games for asthmatic children: describes six games used in an experimentaly study with asthmatic children; lists resources for asthma and activity programs for asthmatics.

Balloons

* Frederick, Joseph B. "Balloons." Best of Challenge, I (May-June 1970): 69-70. (2 pages)

Shows how balloons can be used as excellent devices for teaching various physical-motor skills; introduces several activities and skills performed with balloons.

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*Available only in compilations of Best of Challenge (Volume I or II). Washington, D.C.: AAHPER, 1971 and 1974 respectively. Dates shown indicate issue which appeared in Challenge.

Baseball

Bolt, Martha Lynn. "Softball for the Blind Student." Journal of Health, Physical Education, and Recreation, 41 (June 1970): 37. (1 page)

Presents a modification of softball designed for blind students; batting, pitching, and running were adapted and certain rules changed so as not to alter the game itself.

Lewis, Joseph. "Mock Baseball and Scrub." Vancouver, B.C., Canada: Canadian National Institute for the Blind. Mimeographed. (2 pages)

Describes a form of baseball which would appeal to blind persons regardless of age, state of health, playing experiences, or degree of vision. This amusing and exciting game is stimulating for a group of blind participants. The games does afford groups of blind participants many hours of exciting activity in outdoor programming.

Buell, Charles. "Physical Education for Visually Handicapped." Journal of Health, Physical Education, and Recreation, 42 (April 1971): 63-64. (2 pages)

Discusses adaptation of several physical education and recreation activities which have proved particularly successful with blind children; includes ball games, track and field and fitness tests, tag games, relays, and contests.

Bean Bags

* Havard-Jones, Beti. "Fun and Games with Bean Bags." Best of Challenge, II (September-October 1971): 19. (1 page)

Presents activities with bean bags that are arranged in order of difficulty; encourages and challenges students to develop their own bean bag movements, patterns, and routines.

Bicycling

* Liatsos, Leon. "How to Use the Bike." Best of Challenge, II. (March-April 1972): 58-59. (2 pages)

Provides suggestions to help youngsters meet success through biking, improve their gross motor abilities, and learn to ride a two-wheel bicycle.

Bowling

*Allen, Ralph. "Experiments with Bowling." Best of Challenge, I (September 1967): 45-47. (3 pages)

Includes several articles describing successful bowling experiments and programs in which simple and inexpensive equipment is used. Bowling with improvised and official rules is fun for retarded individuals and an excellent activity for helping them develop coordination and social awareness.

Mason, Robert D. "Bowling for the Handicapped." Washington, D.C.: American Alliance for Health, Physical Education, and Recreation, Programs for the Handicapped (1201 16th Street, N.W., 20036). Mimeographed. (4 pages)

Discusses methods and means that enable handicapped individuals to bowl. The game has been made available to individuals with most any handicapping condition. Discusses specific suggestions for adapting bowling to various handicapping conditions.

Schleichkorn, Jacob S. "Tournament Bowling, an Activity for the Handicapped." Journal of Health, Physical Education, and Recreation, 43 (November-December 1972): 56-57. (2 pages)

Presents bowling as a sport that can give the handicapped individual working with a team a sense of belonging as well as the hope for accomplishing something that others are doing and enjoying. Emphasizes ingenuity in adapting bowling to meet specific needs of each handicapped participant.

Camp Activities

Oliver, James. "Add Challenge with Variety in Activities." Journal of Health, Physical Education, and Recreation, 37 (April 1966): 30-33. (3 pages)

Presents material for use by counselors and other staff in summer day camps for mentally retarded children. Suggestions can be adapted by physical educators in instructional programs for mentally retarded boys and girls in gymnasium or classroom. Includes suggestions for activities involving inexpensive or no equipment. Several selected examples are catagorized.

Croquet

* Peterson, Marshall H. "Indoor Croquet." Best of Challenge, II (March-April 1972): 16-17. (2 pages)

Introduces indoor croquet as an excellent leisure time activity for impaired, disabled, and handicapped individuals. Extensive experimentation has shown that indoor croquet lends itself to all children with a variety of handicapping conditions. Gives when, where, why, who, and how of the activity.

Games

* Capon, Jack. "Think." Best of Challenge, II (January-February 1971): 36-37. (2 pages)

Utilizes perceptual motor playground markings in a variety of activities to motivate children to think, move, and learn while using the markings and playing.

* Douglas, R. W. "It All Adds Up." Best of Challenge, II (September-October 1971): 28-33. (6 pages)

Presents specific games, relays, and other activities developed around classroom units. As young children concentrated upon such things as listening activities, identifying letters and numbers, certain activities were used to reinforce these concepts. Gives a description of activities and their variations.

* Engberg, Edna. "Games for Winning." Best of Challenge, II (May-June 1971): 14-15. (2 pages)

Discusses adaptations of games so that all players who make an all-out effort have a chance to win. Emphasizes ways to equalize competition among players of unequal skills due to age, physical capabilities, handicapping conditions, or other relevant factors.

Gardening

Detwiler, B.; Merrill, D.; and Robinson, Jeri. "Summertime Fun." The Exceptional Parent, 5:3 (June 1975): 31-36. (6 pages)

Describes gardening activities, sand play, and summertime activities that can contribute to learning of children. Activities are adaptable to interests and skills, as well as abilities and disabilities of any child, regardless of handicapping condition.

"Wheelabout Garden." The Exceptional Parent, 5:3 (June 1975): 31. (1 page) (Sponsored by the Easter Seal Society of Massachusetts and carried out through its volunteers at Radcliffe Institute.)

Discusses gardening as one of numerous recreational activities that is easily adapted for severely disabled persons of all ages. This booklet outlines basics of such a program, and its implementation, as observed through a practicum study.

Golf

Adams, Ronald. "Putt-Putt Golf." Journal of Health, Physical Education, and Recreation, 42 (March 1971): 48-50. (3 pages)

Describes putt-putt (minature) golf course adapted for individuals with a variety of handicapping conditions. For the sake of participant's pride and accomplishment, player is taught actual game skills; incorporates a handicap scoring system to equalize competition.

Grosse, Susan J. "Indoor Target Golf." Journal of Health, Physical Education, and Recreation, 42 (January 1971): 73. (1 page)

Introduces indoor target golf as a part of a physical education curriculum devised to provide physically handicapped high school students knowledge, skills, and enjoyable activities in which they can take part as participants or spectators; incorporates innovative, creative, and original approaches to golf.

Gross Motor

Hauck, Eldon. "Successful Achievement Through the Use of Balance Boards." Best of Challenge, I: (November 1967). 55-56. (2 pages).

Presents a series of activities on balance boards for primary level educable mentally retarded children. Emphasizes use of a simple instructional aid to encourage individual achievement and enthusiasm.

Johansen, Gladys. "Integrating Visually Handicapped Children into a Public Elementary School Physical Education Program." Journal of Health, Physical Education, and Recreation, (April 1971): 61-62. (2 pages)

Develops a program in which visually handicapped boys and girls of different ages can be integrated into many physical education activities. Lists objectives of

integrated programs and includes descriptions of the following activities: body conditioning, rope jumping, physical fitness tests, pole climbing, games and relays, tumbling and pyramids, ice skating, balance beam, stunts and self-testing.

*Meyer, Dennis. "Rope Skipping." Best of Challenge, II (March-April 1973): 52-53. (2 pages)

Presents rope skipping as an excellent motor activity that is fun, challenging, adaptable, and developmental in nature. Describes steps, patterns, and routines for progression.

*Schmidt, Dennis. "Multi-Carpet Activities." Best of Challenge, II (November-December 1973): 6-7. (2 pages)

Introduces carpet activities as means of developing body awareness, static balance, ability to follow directions, attention span, locomotor skills, and skill in performing animal walks. Emphasizes every child achieving at his or her own level. Gives examples of activities utilizing inexpensive devices.

*Hickey, Carolyn. "Coordination Series Based on Side-Straddle-Hop." "Sequential and Developmental Activities Leading to the Jump for Ambulatory, Severely Mentally Retarded." Best of Challenge, II (March-April 1970): 5-7. (3 pages)

*Beter, Thais, and Cragin, Wesley. "Sock It, Block It." Best of Challenge, II (September-October 1971): 18. (1 page)

Describes a game which has been extremely popular with children regardless of their abilities, level of skill, or diagnostic categories. Aside from being fun, the game aids in developing movement efficiency, muscular strength and endurance.

Hiking

*Edson, Thomas. "Walks, Rambles, and Strolls." Best of Challenge, II (November-December 1971): 34-35. (2 pages)

Describes implementation of touch on a nature hike and its practical adaptation to daily living experiences.

Innovative Activities

Davis, Ernie. "Collection of Alley Games." Best of Challenge, II (November-December 1970): 11. (1 page)

Lists improvisational type games and how visually impaired youngsters play them.

Chamberlain, James R., and Ryan, Patrice. "Disney World in an Open Gym." Journal of Health, Physical Education, and Recreation, 46 (May 1975): 43. (1 page)

Discusses the theme Disney World for an elementary school physical education open gymnasium program to stimulate self-motivation, create interest and engender enthusiasm. Four major learning centers were chosen from the themes of the real Disney World--Frontierland, Adventureland, Tomorrowland, and Fantasyland. Describes tasks designed to stimulate a child's imagination and creativity while at the same time providing a challenge to succeed regardless of age or ability; can be easily adapted for mentally retarded children.

Myers, Rochelle. "Egg Beaters Corn Meal and Recreation." Best of Challenge, I (March 1967): 28-30. (3 pages)

Describes activities in which children intensely engage on their own by manipulating various material, such as sudsey play, food coloring play, corn meal play. Stimulates children to improvise their own play.

Merrill, Dorothy, and Robinson, Jeri. "Fun Stuff--Dressing-Up." The Exceptional Parent, 5:3 (August 1975): 52. (1 page)

Presents ideas for fantasy play with homemade costumes.

"Learning at Home." The Exceptional Parent, 5:3 (June 1975): 43. (1 page) (Media Resource Center of the Massachusetts Department of Mental Health, Division of Mental Retardation.)

Discusses various activities which can enhance physical and mental development in general and can be fun for parents and children. Includes statement on how each activity is valuable for developing specific physical, intellectual, or social skills.

Williamson, Bob. "New Uses for Milk Cartons." Best of Challenge, I (September 1969): 26-27. (2 pages)

Presents a series of stunts and games utilizing milk cartons in half gallon and gallon sizes. Emphasizes agility, strength and endurance, as well as principles of fair play and teamwork.

Jogging

Laughlin, Sheila. "A Walking-Jogging Program for Blind Persons." The New Outlook for the Blind, 69:7 (September 1975): 312-313. (2 pages)

Deals with fact that many blind persons have a tendency to limit their physical activity to necessary movements. Motion can be increased and physical fitness promoted with a railed track or any adaptive mechanism or technique permitting intense and prolonged activity. Points out most successful instructions for implementation of the program.

Parachute Play

Jacobson, Stan. "How We Teach It." Journal of Health, Physical Education, and Recreation, 46 (January 1975): 57-58. (2 pages)

Features rythmic ideas using a parachute; includes a statement of purpose and objectives for specific activities along with instructions for basic skills and lead-up activities and more advanced games.

Nelson, Pat. "Parachute Play and Ballet." Best of Challenge, I (January 1968): 50-51. (2 pages)

Describes a program in Tulsa, Oklahoma, in which the parachute is used in conjunction with ballet to help children achieve their full potential and stimulate their maximum growth and development.

Play Cards

"Play Cards." Journal of Health, Physical Education, and Recreation, 46 (February 1975): 30. (1 page)

Describes series of play cards and games created for them which help young children master basic physical skills under the guidance of older children.

Ropes

Frederick, Joseph. "Ropes for Wheelchairs." Journal of Health, Physical Education, and Recreation, 42 (March 1971): 50. (1 page)

Discusses use of rope in conjunction with weights and pulleys as an inexpensive physical learning situation requiring little supervision for youngsters in wheelchairs. Suggests activities to promote independence

and give each student a chance to grow and develop at his or her own pace.

Sandbox Play

*Myers, Rogene. "Elevated Sandbox, Cut-Out Sandbox." Best of Challenge, II (March-April 1974): 5. (1 page)

Provides illustrations and directions for constructing devices to use in a cooperative therapy program for profoundly retarded persons. Explores areas such as contact play, water play, and tactile/texture play. Includes directions for constructing and implementing equipment to assist participants functioning at lower levels.

Swimming

Ferro, A. P. "Learning to Get Along in the Water." Journal of Health, Physical Education, and Recreation, 37 (April 1966). (2 pages)

Presents three documents used by a school principal in starting a swim program for mentally retarded children. Includes an extensive list of suggestions designed for instructors to help them teach mentally retarded to get along in the water.

Table Tennis

Adams, Ronald. "Adapted Table Tennis for the Physically Handicapped." Journal of Health, Physical Education, and Recreation, 39 (November-December 1968): 79. (1 page)

Describes ways table tennis can be adapted for individuals having a variety of disabling conditions. Regardless of the condition, adapted table tennis can be played by skilled and unskilled, ambulatory and non-ambulatory, young and old, strong and weak, as well as wheelchair and stretcher patients.

MEETING INDIVIDUAL NEEDS

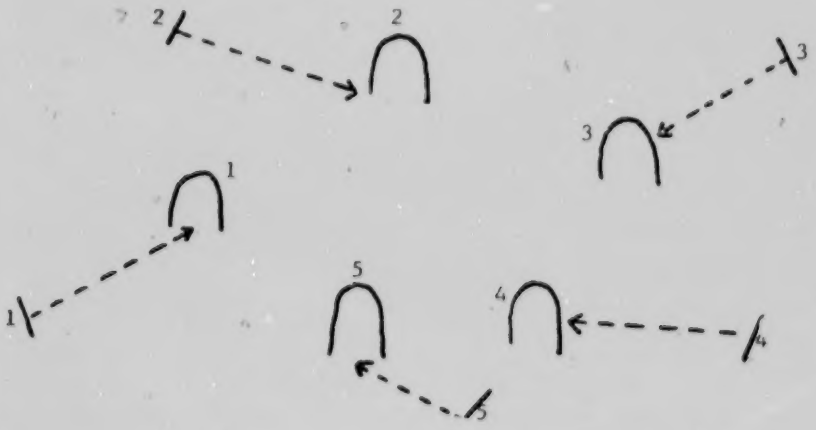
Adaptations for Specific Disabilities

Physical activities may be adapted to suit a certain disability. The adaptation can lessen the degree of difficulty, thus tailoring the activity to a particular handicapping condition, or it may increase the degree of difficulty creating a more challenging activity.

Croquet and Golf Lead-Up

Objectives: To develop direction and control in kicking. To develop a basic understanding of golf and croquet.

Playing Area: Outdoor playfield; wire wickets are placed around the circumference of a circle: starting lines are marked as shown:



Equipment: Adjustable wire wickets (coat hangers straightened) and six to nine inch playground balls.

Teaching Hints: Be sure that children understand the sequency of holes they are to play. Starting lines and wickets should be numbered or marked with the same color. More high skilled players should be allowed to play through as in golf.

Adaptation for wheelchair handicapped or person with poor hand-eye coordination:

Instead of kicking the ball through the wires, the person would strike it through with a large (homemade) mallet. Mallets can be made from large plastic bleach bottles and dowels.

Adaptation for those more highly skilled:

Wickets and balls may be made smaller, and the distances from the starting lines to the wickets increased. Pars may be changed. The game may be played by hitting a smaller ball with a stick or club.

Pin the Tail on the Donkey

Equipment: Poster board with donkey or some other animal picture or object participants will relate to. The picture must be missing a part. In the case of the donkey, it is missing a tail. Each participant is blindfolded and asked to pin the tail on the donkey. Each participant has a number paper tail, and that person to come closest to pinning it in the right place is the winner.

Adaptation for multiply-handicapped in wheelchairs:

Instead of the board being stationary, someone could hold the board and bring it to each blindfolded participant. This would be an easier method for wheelchairs. However, to make it more difficult, the player can have three turns of the wheel to get within range of the poster and then play the game.

Adaptation for those more highly skilled:

Blindfold and spin around several times to make dizzy. Or blindfold and allow a certain number of forward steps (three). Or blindfold and approach the poster backwards.

Obstacle Course

Game: Using furniture in a room, set up an obstacle course. Send three or four players outside of the room and blindfold them before they return. When they return blindfolded, they will go through the obstacle course on the direction of the others not blindfolded. The object is to get through the course without having touched the furniture.

Adaptation with wheelchair handicaps:

The floor can actually be clear of all furniture to facilitate wheelchair movement. However, the blindfolded participants do not know this. They think there is furniture there. By having the rest of the people yelling and screaming directions for them to follow, it can be hilarious for onlookers, challenging and funny for participants.

IDEAS FOR GENERAL ADAPTATIONS AND SUBSTITUTIONS

Plastic Fun Balls with Long Cord Attached

Tie free end of cord to wheelchair, belt, or crutch. Practice throwing or batting; retrieve ball by pulling string.

Plastic Bat, Batting Tee, and Plastic Ball

Use bat with ball tied to it. Retrieve own ball. Use tee so both hands are free to bat; use these items in combinations according to individual's ability and skill.

Indoor Shuffleboard

Use equipment that is smaller, lighter and easier for youngsters to control than outdoor equipment; play on a smaller court. Adapt shuffleboard for table-top play.

Indoor/Outdoor Rubber Horseshoes

Use horseshoes that are light and place rubber mat and peg at desired distance.

Volleyball

Let youngster throw for serve or serve closer to net; have him participate in wheelchair, on crutches, or in brace with little if any other modification or adaptation. Let youngster catch and throw ball rather than hit and volley it; use lighter, easier to control ball such as plastic ball or balloon.

Dances

Have youngster move his/her own way in wheelchair, on crutches, with braces instead of running, jumping, skipping, or galloping; let each devise his/her own movements for each locomotor pattern.

Games

Allow a youngster who can not stand to take part in games and activities by sitting or holding on to something for support. For example--Squirrel in a Tree--allow a physically disabled youngster to be a permanent tree.

Kickball

Modify so physically limited youngster kicks but does not run or only runs to first base where he is replaced by a courtesy runner.

Running Relays

Have physically limited youngster be the one runners tag or get objects from at a goal line. Let youngsters who are not physically limited take turns in a wheelchair or on crutches if necessary to even up squads.

Bowling

Let youngsters bowl from wheelchairs. Others not too steady on their feet can sit in a chair or kneel. Use light weight balls and plastic pins. Plastic bleach bottles or milk cartons can be substituted for pins. If using real pins and balls, an elevated ball ramp will guide the ball down the alley and give it enough speed to knock the pins over.

Croquet Golf

Substitute stakes for wire wickets so youngster simply hits stake. Make wickets from various size automobile tires or coat hangers according to ability and skill of youngsters.

Exercises and Calisthenics

Modify according to movement potential of each youngster. For example--some exercises can be done with little adaptation or change in wheelchair, on crutches, or with braces; other exercises can be done on the floor rather than standing; others can be done according to the individual's interpretation.

ADAPTATIONS FOR SKILL DEVELOPMENT

Many activities lend themselves to progression within their own realm. With slight adaptations, the following pages of skills have been developed into more challenging experiences. Variations depending on the limitations imposed by the individual's impairment are listed to enable the person to progress from the simplest form of an activity to the most difficult arrangement of it.

As the individual moves through the variations of the activity, specific skills will develop as a result of each success. A part-whole method of teaching may be utilized so that a succession of skills will develop an activity.

Name: Mat Activities

Type: Self Awareness (Mentally Retarded)

Equipment: Tumbling mats (there are many ways in which mats can be improvised--e.g., using tires and covering them with canvas, using old mattresses, performing the activities in the grass out-of-doors).

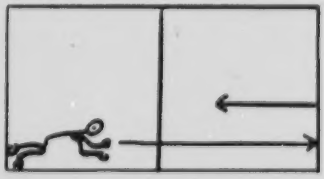
Description: Have maximum participation by the entire group; avoid having one child perform while the others are sitting and watching. The activities listed are simply examples of the many different approaches that can be used.

Mat Activities

Crawl

Starting Position: Crawl position (on all fours) with toes over edge of mat.

Action: Crawl on all fours to the end of the mat as rapidly as possible, touch the floor at the end of the mat with both hands and crawl backward to the starting position.



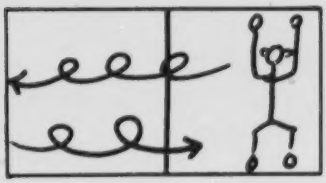
Variations Depending on Individual:

Crawl both ways forward or backward.
Crawl sideward.
Crawl on knees and elbows.

Log Roll

Starting Position: Lie across end of mat, arms may be extended above the head.

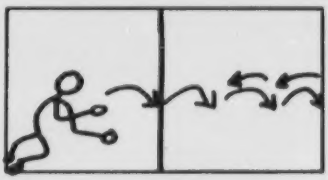
Action: Roll to the end of the mat as rapidly as possible, touch the floor at the end of the mat with the body, and roll back to starting position. Player must stay on the mat. If he rolls off, he must get back on at the point he left the mat and continue to roll.



Bunny Hop

Starting Position: Knees on mat in squat position, hands on mat, toes extended over edge of mat.

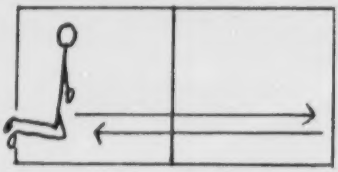
Action: Using arms together, knees together, in an alternating sequence, hop to the end of the mat as rapidly as possible, touch the floor with both hands, and hop backward to the end of the mat.



Knee Walk

Starting Position: Stand on knees and lower legs, hands to side, toes over edge of mat.

Action: Walk forward on knees and lower legs to end of mat as rapidly as possible, touch floor with both hands, and walk backward to the end of the mat.

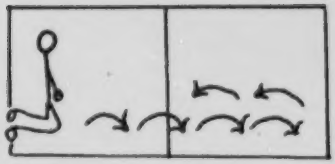


Variations Depending on Individual: Lock hands behind back or behind head.
Walk sideward with a step-close-step sequence (players face).

Knee Hop

Starting Position: Stand on knees and lower legs, arms to side, toes over end of mat.

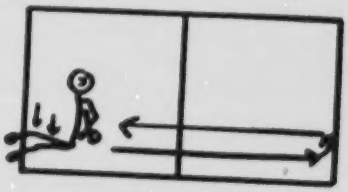
Action: Hop forward with knees together as rapidly as possible to end of mat, touch floor with both hands and hop backward to the end of the mat.



Row the Boat

Starting Position: Sit on mat with legs extended so that heels are over the end of the mat. Hands on mat behind hips.

Action: Keeping the knees straight, and without using the legs, pull the body to the end of the mat with the arms and shoulders. Arms are used together. Touch the floor with both hands, swing the feet around in the opposite direction and return in the same manner to the starting end.

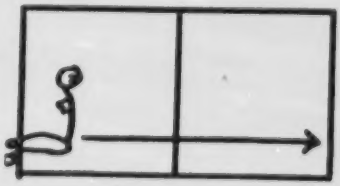


Variation Depending on Individual: Use hands in an alternating sequence (paddling the canoe).

Seat Walk

Starting Position: Sit on the mat with legs extended so that heels are over the end of the mat. Hands folded over chest.

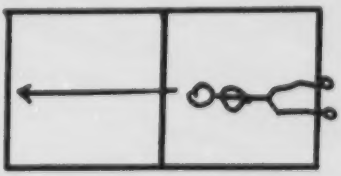
Action: Keeping the knees straight, walk on buttocks to the end of the mat as quickly as possible.



Worm Crawl

Starting Position: Lie on mat on stomach, legs extended, hands locked behind back, and toes over end of mat.

Action: Keeping hands locked in place behind back, and chest in contact with mat, move across the mat as quickly as possible using the legs.



Forearm Walk

Starting Position: Lie on mat, stomach down, legs extended with toes over end of mat. Rest upper body on forearms, with closed fist.

Action: Keeping legs straight, pull body across mat as quickly as possible using area of arms from the fists to the elbows. Use arms in alternating sequence, drag the legs.

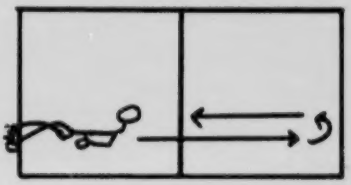
Variations Depending on Individual:

Move forward using forearms together (lock the hands).
Push the body across the mat, feet first.

Shoulder Walk (back-slide)

Starting Position: Lie with back on mat, knees up, with toes over end of mat. Hands locked across the chest.

Action: Using feet in alternating sequence, push the body across mat as rapidly as possible. Use elbows to assist travel. When head touches end of mat, swing feet around to reverse direction and return.



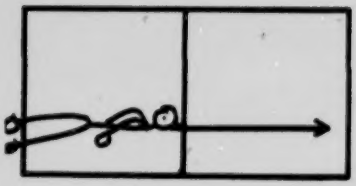
Variations Depending on Individual:

Use feet only without elbows.
Use feet together, instead of alternating sequence.
Reverse direction without turning around, so that body is pulled by feet instead of being pushed.

Walrus Walk

Starting Position: Lie on mat on stomach, legs extended, with toes over end of mat. Arms are extended along sides of the body with palms on mat and fingers pointed toward feet. Head is held off mat.

Action: Arms are used together with fingers always pointed toward feet. Keeping legs straight, flexing only arms, push the body forward to the end of the mat as quickly as possible. The hands are held close to the body and are not brought above the shoulders.

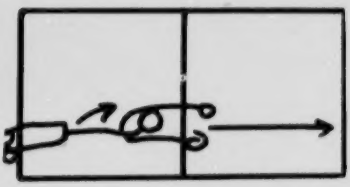


Variation Depending on Individual: Use hands in alternating sequence.

Full Swim Stroke

Starting Position: Lie on mat on stomach, legs extended, with toes over end of mat. Arms are extended in front of the body with palms on mat. Head held off mat.

Action: Arms are used together, legs are kept straight and inactive. Using hands and arms, pull the body forward across the mat with a full arm stroke so that the arms pass through the full range of extension; from over the head to along sides of the body. Each stroke begins with a full extension in front of the body.

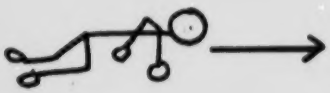


Variations Depending on Individual: Use alternating sequence of arm motion.
Use same position but do a half stroke--arms in full extension, pull body forward until hands come to the shoulders.

Puppy Run

Starting Position: On hands and knees.

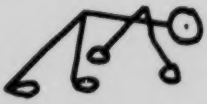
Action: Creep in different directions and patterns (i.e., circle, square, triangle). (Encourage proper cross pattern movement.)



Bear Walk

Starting Position: Bend forward and touch the ground with both hands. Do not bend knees.

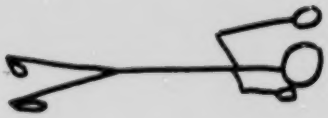
Action: Travel forward at moderate pace moving hand and foot on same side together.



Alligators

Starting Position: Front lying position on floor.

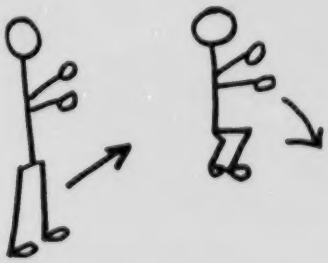
Action: Propel self forward using arms, shoulders, thighs, and toes.



Kangaroos

Starting Position: Upright, legs together, arms held in kangaroo fashion.

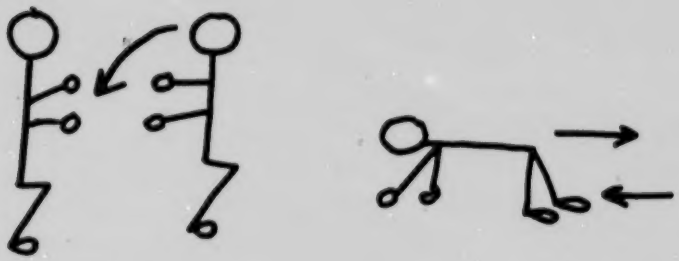
Action: Jump up and down with both feet together moving in different directions (i.e., forward, backward--left, right). (Encourage children to bend knees, lifting feet high from floor while jumping.)



Crab Walk

Starting Position: Facing frontward, bend knees into squat position.

Action: Drop hands and arms behind the body for support. Move forward and backward. (Encourage children to look straight up at the ceiling, dropping head back and down and to keep pelvis parallel with the floor, hips up.)

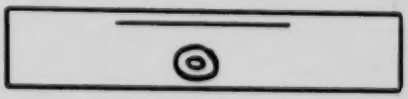


Bean Bag in Circle

Type: Throwing - Underhand.

Objectives: To improve the underhand throwing motion.

Playing Area: Any smooth hard surface; marked as shown:



Equipment: A bean bag for each child.

Description: The players stand eight feet from a double circle target drawn on the play area and toss bean bags at the target. It is a foul to step over the line while tossing or to push or crowd other players. A bean bag landing in the outer circle scores one point while landing in the inner circle scores two points. The player with the highest score wins the game. Small groups or squads for each target increase participation for more children.

Adaptation for Challenge: Increase the distance from the throwing line to the double circle.

Target Toss

Type: Throwing - Underhand

Objectives: To learn to take turns. To gain in experience with numbers and in keeping score. To improve the skill of sliding bean bags for distance, direction, and accuracy.

Playing Area: Any smooth hard surface, marked as follows: A line six feet long in front of each team; a circle three feet in diameter--15 feet in front of the throwing line.

Description: The players stand in a straight line in back of the throwing line. At a predetermined signal, the players take turns stepping to the line and slide their bean bags toward the target circle. After each player has had his turn, the bags in each circle are counted. The team with the highest number is the winner.

Teaching Hints: Have players take turns counting the bags. Put a spot in the center of the circle--count two for any bag touching this spot.

Hit the Bucket

Type: Throwing - Underhand

Objectives: To develop proper technique in throwing underhand.

Playing Area: Any smooth hard surface marked with a circle twelve to twenty feet in diameter.

Equipment: One bean bag for each child; waste can or basket; twelve inch colored ribbon for each child.

Description: The class is in a circle formation with the waste can in the center. The ribbon is tied around left foot of the right handed children and the right foot of the left handers. Children are encouraged to swing the arm back and step forward with the foot with the ribbon around it as they try to toss the bean bag into the waste can. The first child to toss the bag into the waste basket a predetermined number of times can be declared the winner.

Teaching Hints: In order to maintain good class organization, children should take turns tossing. If the class exceeds ten children, two or more circles should be used. Have a player in the middle of the circle to retrieve and return the object. Have several games of three or five children to maintain greater interest than having one game of ten.

Adaptation for Challenge: Have a larger circle and/or smaller can. Include individual and/or team competition.

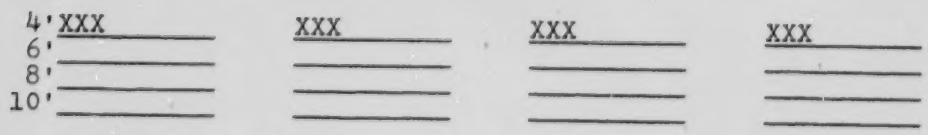
Variations Depending on Individual: Use a ball in place of the bean bag. Use two hand, right hand, and left hand toss.

Back Up

Type: Throwing - Underhand

Objectives: To improve underhand throwing for distance and direction. To develop technique for making a ring to land flat. To have opportunity to share and to take turns.

Playing Area: Any area marked as shown:



Equipment: A rubber ring for each child; a peg, eight inches high for each group of three children.

Description: Children are organized in groups of three or four. Each group has an 8" high peg at which to toss with the court marked as shown. Children take turns, use the underhand throw, and attempt to ring the peg from the line nearest the peg. If successful, the player Backs Up to the next line. The first player to ring the peg from the back line is the winner.

Teaching Hints: Give the restraining lines names such as Sparrows for the first line, Red Birds for the second line, Hawks for the third, and Eagles for the fourth, to make this activity more interesting.

Can Can Game

Type: Throwing - Underhand

Objectives: To develop underhand throwing motion; to learn to follow rules; to learn to use numbers; to learn to keep score.

Playing Area: Sand or other soft surface.

Equipment: Two cans or cups; six rubber washers (three green and three red). Sink the cups in the ground so that their tops are slightly below ground level.

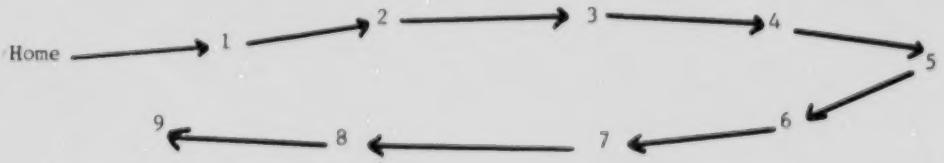
Description: The game is played the same as horseshoes except that washers are used in place of horseshoes and the sunken cups for pegs. The size of the washer, the size of the can, and the distance between the cans are factors that may be changed according to the skill of the players. Scoring can be adjusted according to the abilities of the players. Normally points are scored in any one of the following three ways: (1) a washer in the can counts three points unless neutralized (capped) by an opponent; (2) a washer hanging over the edge of cup (a leaner) counts 2 points unless an opponent's washer is hanging further over the edge, in which case the opponent scores 2 points; (3) any washer within two times the diameter of the washer being used counts one point, however if an opponent's washer is closer, only his counts. The first player to reach 21 points is the winner.

Around the World

Type: Throwing - Underhand

Objectives: To improve the accuracy of the underhand throw; to provide opportunity to keep score; to teach how to make a ring land flat.

Playing Area: Any area as shown:



Description: The object of the game is to travel Around the World with the fewest number of tosses. Pegs are arranged around the course with the distance between them determined by the skill of the players. Starting from Home, each player takes his turn. Each time a toss is made and the peg missed, the player retrieves his ring and returns to try again from the peg from which he was last successful. If a ringer is thrown, the player advances to try for the next peg.

Equipment: A round rubber ring for each player; nine pegs extending about 8" above the floor or ground. (The rubber rings may be made from old garden hose--cut the hose into 24" lengths and fasten the ends by glueing a 3" dowel pin into each end.)

Over the Net (Netball)

Type: Throwing - Catching

Objectives: To introduce volleying to more advanced players; to teach getting the ball over the net; to promote improved social ability; to stimulate muscle development and coordination; to develop an awareness of body parts in relation to the ball, net, teammates, and opponents.

Playing Area: Hard surface marked as a volleyball court.

Equipment: Volleyball and net. (Height of net can be varied according to age and ability of children.)

Description: This game has been used with pre-primary youngsters. Players throw the ball over the net. The other team catches the ball and throws it back. They need not even catch it before it hits the ground--the main objective is to throw the ball over the net--each time it is done scores one point.

Teaching Hints: For very young children, the rules should be kept at a minimum--just getting the ball is a thrill for them. If one student is making all the plays, have the ball thrown to a teammate before returning it over the net.

Adaptation for Challenge: Have the participants throw the ball to a teammate who throws it over the net. Have them strike the ball instead of catching it. Have them hit or catch the ball before it touches the ground. Use fewer players on a team.

Bocce (Italian Bowling)

Type: Throwing - Underhand

Objectives: To develop the underhand throwing motion; to improve in accuracy, distance, and direction in throwing; to learn to keep score.

Playing Area: Any smooth hard surface.

Equipment: A bean bag for each player.

Description: Arrange the children in one or several vertical lines. Using an underhand throw, the first player slides his bean bag on the floor. The other players then take turns to see who can get their bean bags closest to the first target bag. The player who throws closest to the target bag scores a point and then throws his bag first on the next turn. The first player scoring a predetermined number of points wins the game.

Adaptation for Challenge: Play the game with shuffleboard discs and cues or rubber rings.

Teaching Hints: Play several games of five points rather than one of twenty points. Try to knock an opponent's bag away from the target bag without actually hitting the target bag.

Keep It Up

Type: Ball Handling

Objectives: To learn to volley a ball.

Playing Area: Classroom, gymnasium or playground.

Equipment: A volleyball (or other kind of ball) for every five or six players.

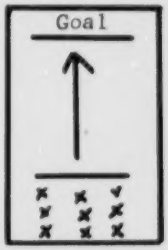
Description: The players form teams of five or six and get in small circles; each team is given a volleyball. On a signal the ball is hit into the air by batting it with the open palms. The team that keeps the ball up the longest wins a point; the team with the most points at the end of the playing periods or after a specified number of tries is declared the winner.

Kick And Chase

Type: Kicking and running

Objectives: To develop ability to kick a ball (stationary and punt). To develop the concept of a line formation. To develop running capabilities.

Playing Area: Play field marked as shown:



Equipment: One 8" playground ball for each team of three.

Description: Children are arranged in lines of three as shown in the diagram. The first player kicks the ball (stationary or punt); all chase the ball. After the ball is picked up, the members of that team stand in their original order at the spot where the ball was picked up. The lead player goes to the end of the line and the next player on each team kicks the ball on signal. The chasing and lining up process is repeated. The first team to get the ball across the goal line and to line up in order with the ball is declared the winner.

Teaching Hints: Have each team go through the game process individually before involving all teams at one time. Arrange teams so that they will be of comparative ability.

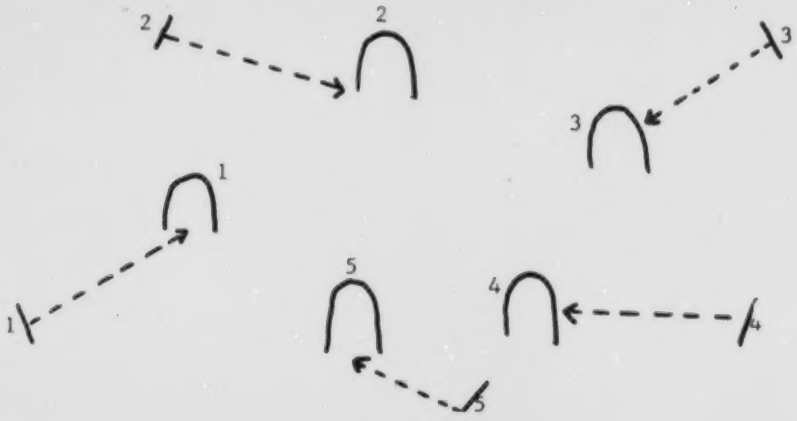
Adaptation for Challenge: The teams return to the starting line in the same manner after reaching the goal line.

Triplets

Type: Kicking

Objectives: To develop direction and control in kicking; to develop a basic understanding of golf and croquet, to teach children to keep score.

Playing Area: Outdoor playfield; wire wickets are placed around the circumference of a circle; starting lines are marked as shown:



Equipment: Adjustable wire wickets (coat hangers straightened) and six to nine inch playground balls.

Teaching Hints: Be sure that children understand the sequence of holes they are to play. Starting lines and wickets should be numbered or marked with the same color. More highly skilled players should be allowed to play through as in golf.

Adaptation for Challenge: Wickets and balls may be made smaller, and the distances from the starting lines to the wickets increased. Pars may be changed. The game may be played by hitting a smaller ball with a stick or club.

Swat To The Right

Type: Striking

Objectives: To learn to give and take; to develop the ability to hit while running.

Playing Area: Any indoor or outdoor area large enough to accommodate the group.

Equipment: Rolled newspaper.

Description: Children form a circle with two feet between them, hands are behind their backs. The leader goes around the outside of the circle and places the newspaper in a player's hands. That player immediately starts swatting the one on his right below the shoulders with the paper. The player being swatted runs to his right around the outside of the circle and back to his original position. The leader takes the place of the swatter as a member of the circle. The new leader (the one now with the paper) then gives the paper to another player and play continues.

Teaching Hints: Do not play with a large group, since only two children are involved simultaneously; have two or more groups playing at once.

Push Ball Relay

Type: Striking

Objectives: To develop skill in hitting a moving ball with a stick.

Playing Area: Outdoor playfield.

Equipment: An eight to ten inch playground ball and stick for each time.

Description: Teams are in a relay file formation. Each player, in turn, pushes a basketball with a stick over a goal line.

Teaching Hints: The ball may be deflated slightly to slow it down. A field is preferable to a hard surface to impede the speed of the ball.

Adaptation for Challenge: A longer stick or smaller ball may be used. The distance between the starting line and goal line may be lengthened.

Variations
Depending on Individual: Push the ball over the goal line, pick it up and carry it back to the next player who waits behind the starting line. Carry the ball to the goal line and push it back over the starting line. Push the ball to the goal line and back across the starting line.

Batball

Type: Striking

Objectives: To develop skill in striking a ball with the hand.

Playing Area: Any smooth hard surface; draw a court with a center and/or boundary lines, as illustrated:

Equipment: 7-inch rubber ball for every two children.

Description: Divide the players into pairs with each couple having a ball. Players hit the ball back and forth using the open hand. Different patterns (e.g., one bounce, two bounces, no bounces) can be introduced.

Teaching Hints: Arrange players so that those together are of comparable ability.

Adaptation for Challenge: Use a smaller ball and/or one that does not bounce as freely. Make the court similar to a paddle tennis court and keep score.

The Target

Type: Throwing - Dodging

Objectives: To improve accuracy in throwing a ball; to dodge a thrown ball.

Playing Area: Playground or gymnasium.

Equipment: Two 7 to 10 inch rubber balls or two volleyballs.

Description: The players form a single circle--one player is it--and is the target. It must stand in a small circle. Players try to hit it with the rubber ball. If it is hit below the waist or gets both of his feet outside the small circle, the thrower becomes it.

Adaptation for Challenge: Use two balls instead of one; make outer circle larger.

Table Football

Type: Ball handling and breath control

Objectives: To develop the ability to control a ball by blowing.

Playing Area: Anywhere with adequate space.

Equipment: Four Coca Cola bottles, a ping pong ball, and a rectangular table.

Description: Four Coca Cola bottles (two at each end of the table) are placed like football goal posts on a table that is wide enough so people do not blow in one another's faces. One end is the Blue team's goal, the other the Red's goal. Players kneel on the floor so their chins are level with the top of the table. Players alternate on each side of the table (i.e., Red-Blue-Red-Blue). One Red player is goal keeper and kneels at one end of the table and a Blue player is the goalie at the other end of the table. The ping pong ball is placed in the middle of the table at the start of the game. The object is to blow the ball through the opponent's goal. If the ball rolls off the table, it is placed in the center and play then resumes. One point is scored for each goal.

Adaptation for Challenge: Have all the Red team on one side of the table and all of the Blue team on the other side. One player from each team opposes each other trying to score a goal. Have several players from each team oppose each other at the same time. Use several balls at the same time.

Ball Passing Relay

Type: Ball Handling

Objective: To develop the ability to handle a ball.

Playing Area: Any in which there is sufficient space.

Equipment: One ball per team and a chair for each participant.

Description: Divide the group into teams of six or seven; the members of each team sit on chairs arranged in files (one behind the other). The first player of each team holds the ball and on the signal Go passes the ball over his head to the next player who passes it over his head to the next, and on to the end of the line. When the player at the end of the line receives the ball, he carries it to the head of the line and sits in the first player's chair. While he is moving from the back to the front of the line, all players in the line move back one seat. The procedure is repeated until all players are back in their original chairs. If the ball is dropped, the player losing it must recover it and return to his chair before passing it on to the next player.

Variations Depending on Individual: Do this in other ways (i.e., sit on the floor; stand) and with various other passes (e.g., roll the ball, hand it to the right or the left, bounce it).

Bill Board

Type: Tossing and Throwing

Objectives: To develop accuracy and skill in the different throwing motions and movements.

Playing Area: Any that is appropriate.

Equipment: A board or heavy paper of convenient size (24 x 24, 24 x 30, 30 x 30) marked in 6-inch squares, or a diagram may be drawn on the floor or blacktop area with chalk. Mark the squares with different numbers to give each a scoring value.

Description: Toss the objects (rubber rings, small bean bags, washers) onto the numbered squares from distances according to the ages and abilities of the children.

Adaptation for Challenge: For those with greater arithmetic ability, increase the numerical value of each square to make adding them more difficult and challenging.

Circle Stride Ball

Type: Striking

Objective: To develop skill in hitting a moving ball on the ground with open hand.

Playing Area: Any smooth surface.

Equipment: A playground ball.

Description: Six to fifteen players form a circle; legs are astride and the feet touch those of their adjoining players. The ball is put in play by a player who hits it into the center of the circle. The ball is hit by players around and across the circle until it passes between a player's legs--this player is then eliminated, returning when the next player is eliminated. The ball must be clearly hit by the hand and not thrown or pushed.

Teaching Hints: The original game of stride ball is one in which players are permanently eliminated. However, by allowing them to return to the game, discipline is easier to maintain and no one child spends most of the time sitting and watching. Those eliminated may be required to perform some other activity (e.g., ten jumping jacks, ten squat thrusts, five sit-ups, run to the fence and back, etc.). Children cannot squat low or put their knees together to stop the ball and prevent it from passing through their legs. If the ball starts bouncing, stop the game and start over.

Variations Depending on Individual: Roll the ball. Have the player, who is designated as <u>it</u> in the center of the circle. Try to roll the ball out of the circle between the feet of any of the players. If <u>it</u> is successful, he and the one who let the ball go through his legs change positions. Have players on the circle try to pass the ball among them without <u>it</u> touching the ball.

Balloon Push Ball

Type: Object Handling

Objectives: To improve hand/eye coordination, endurance, and mobility.

Playing Area: An open playroom or gymnasium.

Equipment: Large inflated balloon or beach ball.

Description: Have teams of equal numbers on opposite sides of the center line. The balloon is tossed up over the center line. Players can use any part of the body to bat the ball. All players may cover any area after the center toss. A score results when the ball touches the opponent's wall. Any number of predetermined points constitutes a game.

Adaptation for Challenge: A large beach ball instead of the balloon creates a much more challenging game.

Hot Potato

Type: Ball Handling

Objectives: To improve in throwing and catching a ball.

Playing Area: Playground, gymnasium, or classroom.

Equipment: Two 7 to 10 inch rubber balls, two basketballs, two bean bags, or two volleyballs.

Description: Players form a circle and pass a ball among them very quickly. At a signal--Hot Potato--the player having the ball is eliminated and stands in the middle of the circle. After five players are in the middle, another circle is started. The last players to be passing the ball around the first circle win.

Adaptation for Challenge: Increase the size of the circle. Place a person in the center of the circle who is <u>it</u>. Players on the circle pass the ball among themselves trying to prevent <u>it</u> from touching the ball. If <u>it</u> touches the ball, he changes places with the one who threw it.

Variations Depending on Individual: The ball is bounced or specific kinds of throws (underhand, overhand) or passes are used.

Beatball Overtake

Type: Ball Handling

Objectives: To acquaint children with a circle formation; to improve ball catching skill.

Equipment: A large circle and a large playground ball.

Description: Players are in a circle formation with the leader holding a ball and standing in the middle of the circle. The leader calls the name of one of the players and then throws him the ball. The player called hands the ball to one of the players on either side of him and then steps to the outside of the circle. He begins walking around the outside of the circle in the direction which he passed the ball. The players meanwhile pass the ball around the circle. The player walking attempts to beat the ball back to his starting place.

Adaptation for Challenge: Make the circle larger. Allow the players to run around the circle.

Bean Bag Distance Throw

Type: Throwing

Objectives: To improve skill in throwing for distance. (Use both underhand and overhand throwing motions.)

Playing Area: Playground or gymnasium.

Equipment: One bean bag for each child.

Description: Children line up behind a throwing line. On the signal from the leader, the children throw the bean bags as far as possible. After all bags have been thrown, children run to retrieve their own bags, then return to the throwing line.

Adaptation for Challenge: A target may be used to challenge the players.

Steal the Base

Type: Throwing

Objectives: To improve skill of throwing ball at a moving target.

Playing Area: Playground or gymnasium.

Equipment: Volleyball or 7 to 10 inch rubber ball.

Description: Players are divided into small groups who choose a certain spot on the play area for their home. One player is designated as it. It stands holding a large rubber ball in the middle of the play area. The different groups motion to each other to change homes with them. It tries to hit them with the ball. If it succeeds in hitting one, he takes his place in the group and the one hit becomes it. If it doesn't hit someone in three tries, he chooses someone else to be it.

Donkey Dodge Ball

Type: Throwing and Dodging

Objectives: To improve in throwing a ball.

Playing Area: Playground or gymnasium.

Equipment: 7 to 10 inch rubber ball or volleyball.

Description: Players are in a circle; three players are in the center and form the Old Horse. Each of these three clasps the player in front by the waist. The player in front is the head; the next player, the body, and the last player, the tail. The players in the circle are given a ball and attempt to hit the tail. When the tail is hit, he joins the circle and the player hitting the tail becomes the head--the head becomes the body, and the body becomes the tail. The game continues in this manner.

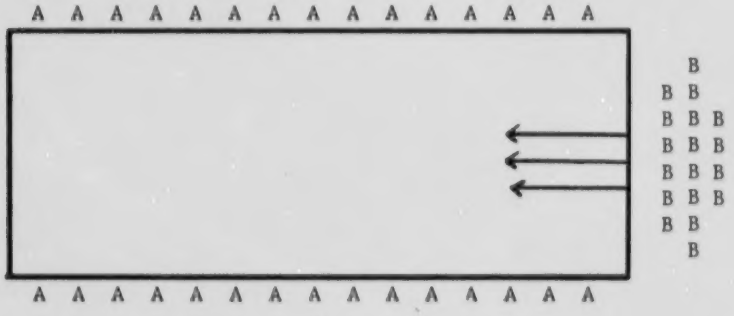
Adaptation for Challenge: Increase the size of circle; use two or more balls.

Running Dodge Ball

Type: Throwing and Dodging

Objectives: To improve agility; to stimulate cardiovascular endurance, to improve throwing skills.

Playing Area: Playground or gymnasium. Use two parallel lines about 30 feet apart to form a gauntlet. The gauntlet, as illustrated below, is about 60 feet long. A volleyball court is ideal.



Equipment: Four to six rubber balls (soft foam rubber or rolled up gym socks make adequate substitutes).

Description: Team A throws; Team B runs the gauntlet. Team A players line up on each side of the playing area. Team B lines up at one end of the gauntlet. On a signal, Team B players run through the gauntlet, touch the end line and run back to the starting line. A point is scored for each player completing the gauntle without being hit. Players getting hit must sit down immediately. Team B then becomes the throwing team and Team A runs the gauntlet.

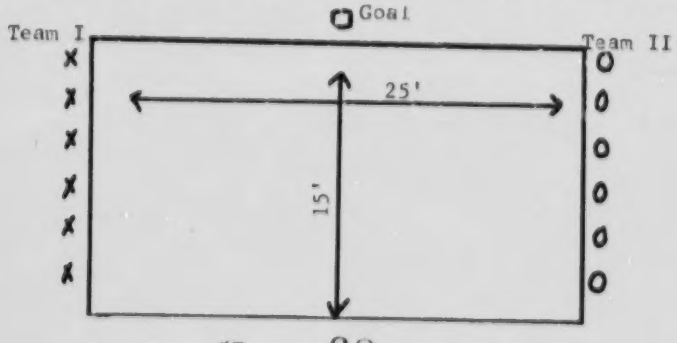
Teaching Hints: Running Dodge Ball should be preceded by other more simple games involving dodging and throwing.

Evading Ball

Type: Throwing and Dodging

Objectives: To improve in throwing a ball accurately and in dodging a thrown ball.

Playing Area: Playground or gymnasium marked as illustrated:



Equipment: A 7 to 10 inch rubber ball, or a volleyball.

Description: The players are divided into three equal teams. Team I and Team II form at the side lines and face each other 25 feet apart. Team III stands single file outside the playing area between the two teams and is the running team. A goal is established 15 feet in front of Team III as is illustrated in the diagram. A volleyball is given to one of the players on either Team I or Team II. On a signal this player throws the ball at the first runner from Team III who runs to the goal and back. A point is scored if the runner succeeds in keeping from being hit by the ball. When the entire team has run, the scores are totaled and the teams change positions until all teams have been the runners. The team with the highest score wins the game.

South American Relay

Type: Ball handling and running

Objectives: To develop skills in handling a ball and in running; to develop the ability to follow directions and rules.

Playing Area: Any in which there is sufficient space.

Equipment: Rubber ball, volleyball, or other ball of this type.

Description: Divide children into two vertical lines with approximately six children to each line, and assign them consecutive numbers. On the starting signal, No. 1 rolls the ball to No. 6. As soon as No. 6 gets the ball he steps into line, replacing No. 5 who has moved up one place. The ball is passed between players down the line during which time No. 1 runs to the back of the line and takes the place of No. 6. As soon as No. 2 receives the ball he steps into the place formerly occupied by No. 1 and becomes the roller. This continues until No. 1 is back in his original place. (See diagram.)

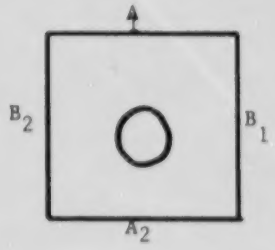
Variations Depending on Individual: Use different kinds of passes (e.g., overhead, between legs, over-and-under, side, etc.). Use different locomotor skills (e.g., jump, hop, skip, gallop, slide, etc.), to move from the front to the back of the line.

Come Back Ball

Type: Ball Handling

Objective: To improve in ability to handle a ball.

Playing Area: Any smooth hard surface, marked as indicated:



Equipment: Balls that will bounce.

Description: Four players stand on each of the sides of a 12-foot square marked in the play area. In the center of the square is a circle 12 inches in diameter. Each player faces his partner across the square. The players keep the ball bouncing from the palm of one hand to the center spot and on to the player opposite; the ball is returned in the same way. A bad stroke makes it impossible for the player opposite to return it and counts as a miss, at which time the ball goes to the other pair.

Adaptation for Challenge: Have the players try to knock their opponents' ball out of the center as it hits there. Have both pairs of players keep balls going back and forth across the square at the same time.

Twin Ball

Type: Kicking and Dribbling

Objectives: To develop the ability to keep a ball under control while kicking it (foot dribble). To improve in kicking accuracy.

Playing Area: Any smooth surface.

Equipment: Indian Clubs, old bowling pins, filled bleach bottles, or filled milk cartons. A ball for each team.

Description: Each team has one ball and one club (or other object). Give each person a number (in large groups, give a number to two or more individuals on each team); the instructor calls a number--the appropriate players run from their lines, kick the ball and attempt to knock over their club. The first one to knock the club down scores a point for his team. The game can be won by a certain number of points (after all have had their turns, or after a specific time limit has been reached).

Adaptation for Challenge: Omit the ball and have the players run and attempt to kick the club over with their feet. Have the players dribble the ball to a given line from which they try to knock the club over with the kicked ball. Put additional material in the bleach bottles or milk cartons to make them heavier and more difficult to fall. Have the players throw the ball from a certain line rather than kicking it.

Disc Relay

Type: Pushing with an object

Objectives: To learn to take turns; to develop an underhand pushing motion; to develop ability to control the shuffleboard cue and disc.

Playing Area: Any smooth hard surface.

Equipment: Shuffleboard disc and cues (or other similar objects).

Description: Divide the group so there are no more than four players to a team. Mark goal line with masking tape, chalk, etc., on the floor about 20 feet from the starting line. Each player in turn pushes the disc with the cue across the goal line and then back to the starting line. The cue must remain in contact with the disc at all times.

Adaptation for Challenge: Change the goal to a circle. Each player, in turn, shoots at the circle until he puts the disc in the circle.

Guard the Gate

Type: Rolling a Ball

Objectives: To improve the ability to roll a ball accurately and with greater force; to react to an on-coming ball and stop it.

Playing Area: Any with adequate space.

Equipment: One large rubber ball.

Description: Players sit on the floor in a circle about an arm's length apart. Each player guards the space on each side of him--lifts the arms to fill the air space (put up the gate) and lowers the arms to fill the floor space (lower the gate). When players have the idea of guarding the gate, one player takes a ball and rolls it as hard as he can across the circle to try and get it through an open space. Players next to that space try to stop the ball. The player who stops the ball rolls it next. If the ball goes through the gate, the two players next to the opening race for it. The one getting the ball next rolls it.

Teaching Hints: Stress that all players except the two going after the ball should remain seated. Praise the player who manages to roll the ball through a gate as well as the one who is able to stop the ball.

Call Ball

Type: Object Handling

Objectives: To improve in the ability to toss, throw, and catch an object; to react to a specific stimulus.

Playing Area: Any with adequate space.

Equipment: Bean bag or ball.

Description: A circle is formed with one player taking his position in the center. He tosses the ball up in the air and calls the name of any player on the circle. The player whose name is called attempts to catch the ball before it hits the floor (or on the first bounce). If he is successful, he gets to toss the object from the center and call a new player's name. If the player whose name has been called is not successful in catching the object, the original thrower tosses the object again.

Teaching Hints: The center toss should be fair and to a height named by the instructor. Give suggestions on catching and throwing as the children play. Do not leave anyone in the center for a long period of play. Try to see that everyone gets a chance in the center.

Adaptation for Challenge: Give the children numbers, names of animals, or other objects rather than having them respond to their own names.

Balloon Volleyball

Type: Striking

Objectives: To develop the skills of striking; to learn to perceive a moving object.

Playing Area: A net is suspended at four to five feet across the middle of a playing area, 15' x 30'.

Equipment: Balloons of various sizes, pennies, and a net.

Description: The game is played much like volleyball except that a balloon is substituted for the ball. Players may strike the ball twice in a row; it may be hit six times on a side. Play is started by a two hand hit by the player in the serving position; his team has five more hits in which to get the balloon over the net.

Teaching Hints: Begin with instruction in striking, allowing each player to have a balloon with which to practice keeping it in the air and under control.

Adaptation for Challenge: As the game becomes too easy, place a penny inside the balloon to make it fall faster. Allow up to six persons on a team.

Variations Depending on Individual: Pass the ring--form a circle and hit the balloon in such a manner that it moves around the circle. Two Man--same as above except it is done in a smaller area and with fewer players.

Juggle Volleyball

Type: Volleyball Lead-Up

Objectives: To introduce and improve the skill of volleying a ball; to improve team play; to learn the general features of a team sport similar to volleyball.

Playing Area: Gymnasium or volleyball court.

Equipment: Volleyball and net.

Description: The game is played the same as Newcomb except that the ball is volleyed to teammates and opponents instead of thrown. For example, a player receiving the ball from a teammate or opponent will catch the ball, toss it in the air and then volley it.

Boundball

Type: Volleyball Lead-Up

Objectives: To learn the basic rules of volleyball; to develop the specific skills necessary for playing volleyball.

Playing Area: Rectangular court 60' x 30' with a center line two inches in width dividing it into two equal halves.

Equipment: Volleyball (no net).

Description: The game is played according to rules that are essentially the same as volleyball except that the ball is allowed to bounce before it is hit and the center line on the court replaces the net. Rules governing positions, rotation, serving, playing the ball, number of hits, etc., can be made identical to regulation volleyball with the exception as stated.

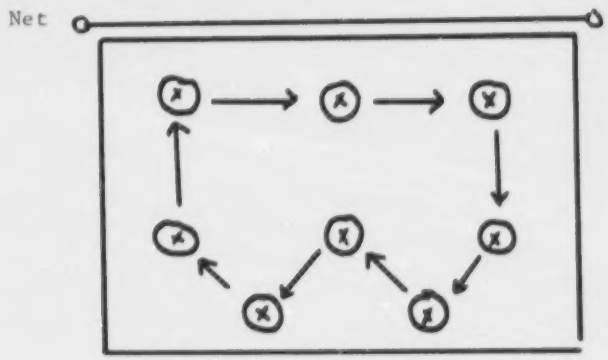
Variations Depending on Individual: Move the service line to an area inside the court; change the number of hits allowed by an individual or on one side of the line.

Newcomb

Type: Volleyball Lead-Up

Objectives: To learn court formations and rotation; to improve skills of catching and throwing.

Playing Area: A volleyball court or similar space, marked as illustrated:



Equipment: Volleyball and net.

Description: The game consists of throwing a volleyball back and forth over a net between teams consisting of eight players who arrange themselves as shown on the diagram. The game is started by the server who throws the ball from behind the end line. Two teammates of the server must play the ball before it crosses the net; the third player must throw the ball over the net. All throws crossing the net must be traveling in an upward arc when the ball leaves the thrower's hands; slamming is illegal. No more or no less than three players may play the ball before it crosses the net. A player touching the ball or a ball touching a player shall be considered as having played the ball. Players must throw the ball from approximately the same place the ball was caught. A ball landing on a boundary is in. A ball may be played twice by the same players providing it is played by a teammate in between. Players of the serving team must rotate as indicated by the arrows in the diagram; a team rotates only when receiving the ball to serve. Points may be scored only by the team serving. The penalty for violations is loss of ball for the side serving and loss of points if the receiving team fouls.

Adaptation for Challenge: Four of the eight players must be girls. Teams are arranged so every other player is a girl. The ball must be played alternately by boys and girls.

Bat V Ball

Objectives: To learn to serve a volleyball.

Playing Area: Playground or large room marked.

Equipment: A volleyball.

Description: The players are divided into two equal teams--one team is in the field and the other is at bat. The first player at bat hits the volleyball with his fist into fair territory. The batter then tries to run to the base line and back to the service line without being put out. This scores one point if he is successful. The batter may be put out by (1) failing to hit a good ball in three attempts (the ball must cross the scratch line and land in fair territory to be good); (2) being hit with the ball by a fielder while between the service and base line; (3) remaining on the base line when another batter runs to it. A fielder may make a foul and give the opposing team a point by (1) running with the ball; (2) holding the ball more than 3 seconds; (3) hitting the runner while the runner is between the service and scratch line. Three outs retire a side from bat. The team with the highest score at the end of five innings wins.

RESOURCES FOR ADDITIONAL INFORMATION

Annotated Listing of Films

1. A Dream to Grow On (16mm, sound, color, 28 minutes). Bone Film Service, 3132 M Street, N.W., Washington, D. C.

   Narrated by former Olympic decathlon champion Rafer Johnson, this film shows 1,000 mentally retarded children running, jumping, swimming, and competing in other events in the 1968 Special Olympics in Chicago. It emphasizes that when these children receive training, help, and understanding, they can derive the same benefits from play and participation in sports as their nonretarded peers. Action unfolds in a wide range of athletic events--50 and 300-yard dashes, high jump, standing long jump, softball throw, gymnastics, trampoline, floor hockey, swimming, basketball, and football, along with the pageantry of the first Special Olympics.

2. And a Time to Dance (16mm, sound, black/white, 10 minutes). Commonwealth Mental Health Foundation, 4 Marlboro Road, Lexington, Massachusetts, 02173.

   Shows Norma Canner, one of the earliest dancers to use creative movement with children. In this film she works with two classes of retarded children--one class in an institution, one in a community nursery.

3. And So They Move (16mm, sound, black/white, 19 minutes). Audio-Visual Center, Michigan State University, East Lansing, Michigan, 48824.

   Film deals with the application of movement to the physically handicapped. The rationale, activities, methods, and procedures are appropriate for mentally retarded of all functional levels. Encourages children to extend themselves in purposeful and enjoyable movement. They become better able to relate to one another, create their own play environment, enjoy trying, and thrill to the adventure of exploration. Much of the program is built around improvised equipment--boxes, blocks, hoops, ropes, and benches--innovative indoor obstacle courses, and creative use of conventional playground equipment.

4. An Assembly Program in Physical Education by EMR Children (16mm, silent, color, 10 minutes). Ridley School District, Folsom, Pennsylvania, 19033.

   Warm-up exercises, tumbling, stunts, apparatus, Indian Club activities, and ball routines are performed by educable mentally retarded children for public school assembly program.

Performance is well received by an audience of normal children. Dispels some fears about what retarded children can and cannot do.

5. Anne Arundel County Special Olympics (16mm, sound, color, 12 minutes). 10621 Fable Row, Columbia, Maryland.

   Special Olympics Day at the United States Naval Academy, Annapolis, Maryland, features mentally retarded and physically handicapped children and young people competing in various track and field activities.

6. Anyone Can (16mm, sound, color, 27 minutes). Bradley Wright Films, 309 North Duane Avenue, San Gabriel, California, or California Association for Neurologically Handicapped Children, 6472 Will Rogers Street, Los Angeles, California.

   Demonstrates a variety of creative and innovative activities and approaches for each of four training components: rope-handling skills; ball-handling techniques; the stegel and its multiple uses; and trampoline activities. Emphasis is on problem-solving approaches, in which each child is encouraged to think and concentrate upon the tasks at hand. Designed to be used as a guide by parents and persons involved in recreation or institutional program.

7. Arts and Crafts for the Slow Learner (16mm, sound, black/white, 26 minutes). SWS Educational Films, 3031 Kallin Avenue, Long Beach, California.

   Emphasizes values and contributions of arts and crafts to the total development--physical, social, emotional, and mental--of slow-learners and mentally retarded children. Demonstrated are activities including paper mache, finger painting, wet chalk drawing, potato carving, knitting, glass painting, bead stringing, wood burning, leather craft, copper tooling, clay sculpture, and loom weaving.

8. Basic Ball Dribbling (16mm, sound, color, 10 minutes). Martin Moyer Productions, 900 Federal Avenue East, Seattle, Washington, 98102.

   Shows a variety of ball handling activities designed to improve skills and to develop perceptual-motor abilities. Music and verbal directions are used to direct activities.

9. Bob and His Friends on the Playgound (16mm, sound, color, 5 minutes). Educational Materials Distributors, Weslaco, Texas, 78596.

   Desirable play concepts and practices are developed in a special elementary-level classroom by educable mentally

retarded children. A young boy and his classmates are shown exercising, playing games, and participating in various sports.

10. Cast No Shadow (16mm, sound, color, 27 minutes). Professional Arts, Inc., Box 8484, Universal City, California.

Depicts a wide range of recreation activities for severely and profoundly mentally retarded, physically handicapped, multihandicapped, and emotionally disturbed children, teens, and adults at the Recreation Center for the Handicapped (San Francisco, California). Emphasis is on values of recreation and its effects upon lives of handicapped persons as they participate in a variety of activities from snow skiing at Squaw Valley's Olympic Village to wheelchair surfing in the Pacific Ocean.

11. Challenge: A Camp for All Seasons (16mm, sound, color, 12 minutes). Easter Seal Society of Florida, 231 East Colonial Drive, Orlando, Florida, 32801.

Depicts a general overview of camp management and support and presents camp facilities. Supported by the Easter Seal Society of Florida, the program at Camp Challenge is designed to challenge both children and adults with a variety of impairments and disabilities. Provides opportunities for each camper to participate in many activities--arts and crafts, nature, aquatics, small craft, fishing, dancing, archery, bowling, and other recreational sports. The therapeutic design of the swimming pool affords multiple use; wooded and play areas complement nature and outdoor activities; an artificial lake creates opportunities for experiences in small craft and fishing; buildings are functional as well as aesthetic.

12. Come On Carrie, Come On (16mm or video, sound, color, 27 minutes). Special Olympics, Inc., The Joseph P. Kennedy Jr. Foundation, 1701 K Street, N. W., Washington, D. C., 20006.

Includes a general introduction to the area of mental retardation and discusses the contribution physical activity and the Special Olympics make to development of retarded children. The story itself is about a nine year old girl with Downe's syndrome. Emphasis is on keeping retarded children in the community.

13. Community Adaptive Recreation Program for the Handicapped (16mm, sound, color, 7 minutes). Recreation and Adult Division, Milwaukee Public Schools, P. O. Drawer 10K, Milwaukee, Wisconsin.

Emphasis on providing a balanced teaching and training developmental program through recreation; it is based upon

activities sponsored by the Recreation and Adult Division, Milwaukee Public Schools. Keys to the program are embodied in adaptation, imagination, and ingenuity; games and equipment are custom made where needed and necessary. Designed to meet individual needs and satisfy personal interests so that each child is encouraged to act. Provides opportunities for these children to do things that can be done by any other child, emphasizes these youngsters as people first and handicapped second.

14. Demonstration Lesson in Physical Education (16mm, sound, black/white, 28 minutes). Audio Visual Studio, National Education Association, 1201 Sixteenth Street, N.W., Washington, D. C., 20036.

Shows approaches, techniques and some of the activities used by Ernie Davis in the physical education program at Crowley Special School, St. Paul, Minnesota. IQ's of participating children range from 50 to 80 (mean of 72) while their mean chronological age is about thirteen. Demonstrates activities such as responding to commands; lining up and counting off; running relay races; participating in circle games; organizing squads; using innovative and creative warm-up activities; teaching tumbling activities--shoulder roll, progressively to the hand stand; and doing partner stunts. Valuable, practical, and highly motivating teaching procedures and methods are used throughout the demonstration lesson.

15. Developmental Physical Education (16mm, sound, color, 28 minutes). Simenson and Johnson, Box 34, College Park, Maryland.

Presents activities in appropriate sequence and meaningful progressions to help trainable mentally retarded to follow directions, achieve success, confidence, become more cooperative, and gain physical fitness and motor ability. Most activities shown do not require expensive or extensive equipment. Teacher-leader participation, ingenuity, and sincere interest in the children are clearly evident. Enjoyment, pleasure, and fun are reflected through the spontaneity of children's participation, nature of their comments, and expressions on their faces. The philosophy embodied in the final words, "To move is to live and to enjoy the quantity and quality of life," is shown in action for all to see and incorporate into their own programs.

16. Everybody Wins (16mm, sound, color, 22 minutes). Bradley Wright Films, 309 North Duane Avenue, San Gabriel, California, 91775.

Shows methods, activities, procedures, and techniques of reaching individual children through active participation in

physical education. Includes ways and means to recognize a child's readiness for specific activities, to consider his previous experience in these and related activities, and to allow for experimentation to meet individual needs and differences. Introduces and discusses concepts which can be applied and adapted to other activities, skills, and movement programs not included in this film. Emphasis is on the practical functional, and logical with much use made of homemade, improvised, easily obtained, and inexpensive equipment and devices. Direct and indirect application can be made to call children including impaired, disabled, and handicapped.

17. Floor Hockey (16mm, sound, color, 15 minutes). Canadian Association for Mental Retardation, Kinsmen NIMR Building, York University, 4700 Keele Street, Downsview, Ontario Canada.

    Aims directly at players, provides sequences and progressions to help introduce and expand this activity in physical education and recreation programs in public school and community recreation settings for educable mentally retarded. Adapting teaching methods to meet varied needs and abilities of retarded participants are a major contribution of the film.

18. Fun With Parachutes (16mm, sound, color, 12 minutes). Documentary Films, 3217 Trout Gulch Road, Apton, California, 95003.

    Offers a visual presentation of selected parachute activities that add a new dimension to all levels of the physical education program. Shows how parachutes can be used to develop strength and endurance, teamwork and cooperation, while having fun. Used with large groups, the parachute can be used for both structured game situations and creative activities. Used effectively with all types levels and ages of impaired, disabled and handicapped persons because of its tremendous versatility and universal appeal.

19. Hi -- Look Us Over (16mm, sound, color, 22 minutes). Canadian Association for Mental Retardation, York University, 4700 Keele Street, Downsview, Ontario, Canada.

    Discusses athletic competition for retarded children in Canada, including track and field, floor hockey, and swimming in the Special Olympics. Shows general information on mental retardation and need for retarded persons to have a chance to participate in physical activity programs.

20. Just for the Fun of It (16mm, sound, color, 18½ minutes). Orange County Department of Education (Educational Media Center), Civic Center Drive, Santa Anna, California.

Presents a series of physical activities for mentally retarded children. Provides ideas and activities from the most simple to complex. Shows activities in the following areas: posture improvement, balance training, body awareness, spatial awareness, anticipation and timing training, group participation, increasing attention and lengthening interest span, muscle strength and endurance. Stimulates creativity since many activities shown are done with inexpensive, easily obtained, and highly motivating pieces of apparatus.

21. Little Marty (16mm, sound, color, 5 minutes). The National Foundation-March of Dimes, 800 Second Avenue, New York, New York, 10017.

Presents Marty, eight year old poster boy of the National Foundation. Born with no arms, one leg shorter than the other, and other birth defects, he feeds himself, paints, types, swims, plays softball, soccer, cards with artificial arms and a built-up shoe. His great determination and courage are truly inspirational.

22. Movement Exploration: What Am I? (16mm, sound, color, 11½ minutes). Film Associates, 11559 Santa Monica Boulevard, Los Angeles, California, 90025.

Provides exciting motivation for children and an excellent guide for teachers based on knowledge of the positive relationship between sensorimotor activities and perceptual development. Explores movement, clarifies concepts of direction and space as related to themselves, and promotes development of perceptual skills which effect their ability to read and write. Studies movements of things around us.

23. Physical Education for Blind Children (16mm, sound, color, 20 minutes). Charles Buell, 4244 Heather Road, Long Beach, California, 90808.

Shows visually handicapped school children of all ages participating in a wide variety of physical education activities. Presents approaches to modify activities so visually handicapped children can participate with their sighted classmates. Stresses importance of physical activity for visually handicapped children along with contributions of active participation in physical education to social development, leisure-time pursuits, and physical fitness.

24. Physical Education: Lever to Learning (16mm, sound, color, 20 minutes). Stuart Finley, 3428 Mansfield Road, Lake Barcroft, Falls Church, Virginia, 22041).

Emphasizes the use of wholesome, vigorous physical activity as a means of motivating and challenging mentally retarded

youngsters to improve performance and to stimulate total growth and development. Shows primary and intermediate educable youngsters negotiating obstacles on an improvised confidence course consisting of tires, ropes, ladders, a softball backstop, hurdles, a jungle gym, and a balance beam. Shows advanced elementary school educable youngsters participating in indoor activities involving chairs, logs, ropes, and balance boards.

25. The Proud Ones (16mm, sound, color, 13½ minutes). Montana Film Productions, 1236 Helena Avenue, Helena, Montana, 58601.

Presents purposes, reasons, and values of active participation by mentally retarded youngsters in sports, athletics, and other fun activities in terms of Montana Special Olympics. Shows boys and girls swimming, running, jumping, and throwing in competition as well as eating, dancing, socializing with others, relaxing, and having fun. Shows swimming and track and field events as vehicles for participants to establish goals that are important to them as individuals, to have a sense of belonging, to experience success, and to stand tall in victory or defeat. Enables a youngster to have a personal feeling of accomplishment, and pride in having done his best.

26. Recreation Center for the Handicapped (16mm, sound, color, 23 minutes). East of the Mississippi River apply to Audio-Visual Studio, National Education Association, 1201 Sixteenth Street, N.W., Washington, D. C., 20036; west of the Mississippi River apply to Mrs. Morris Pomeroy, Director, Recreation Center for the Handicapped, Great Highway near Sloat Boulevard, San Francisco, California.

Founded in 1952, the Recreation Center for the Handicapped provides year round programs for severely handicapped participants of all ages. The program stresses achievement of happiness and contentment as each individual, regardless of his condition, learns to do for himself and to stand on his own two feet. The film shows participants active in checkers, music activities (tamborine and bongos), clay work, outdoor activities, table games, wrestling, swimming, fishing and casting, woodworking, playground activities, snow and winter activities, and dancing. Some of the many ways in which the participants help each other are vividly shown.

27. Roadwork (16mm, silent, black/white, 15 minutes). Dr. James N. Oliver, School of Education, The University, Birmingham 15, England.

Combines use of different types of movement with interesting and challenging physical activities. Shows a typical roadwork session with mentally retarded boys including ambling,

fast or race walking, jogging, trotting, sprinting, skipping, hopping, bounding, running backwards, and crawling. Shows various partner activities. Makes full use of the natural environment including fallen tree trunks, small ditches, hills, and trees. Note: A taped narration accompanies this film which can be played during the showing or used to become acquainted with the film to prepare one's own narration.

28. Rope Skipping (16mm, sound, color, 16 minutes). Martin Moyer Productions, 900 Federal Avenue East, Seattle, Washington, 98102.

Demonstrates rope skipping as a physical education class activity. Contains a description of a variety of skipping steps and a short discussion of values of rope skipping.

29. Shape of a Leaf (16mm, sound, color, 30 minutes). Campbell Films, Saxtons River, Vermont, 15154.

Reveals the sensitive responses of retarded children to various types of art training. Demonstrates the artistic creativity and the individuality of style that these children possess. Shows the following art mediums: perception training boxes, painting, creative stitching, weaving, batik, ceramics, and puppets; art experiences are also related to other activities through verbalization and music.

30. Splash (16mm, sound, color, 21 minutes). Documentary Films, 3217 Trout Gulch Road, Aptos, California, 95003.

Shows exciting, stimulating, and fun ways to use water environments--pans, sprinklers, wading pools, and swimming pools--and aquatic activities to introduce and reinforce a variety of concepts are presented to subtrainable-severely mentally retarded and multiple handicapped children in practical, functional, and meaningful ways. Offers a tremendous motivation for learning that has been relatively untapped, and yet it is so simple and inexpensive! (Water)

31. Swimming for a Congenital Quad Amputee (16mm, silent, black/white, 10 minutes). Instructional Media Center, University Station, Austin, Texas, 78712.

Illustrates development of swimming and diving techniques by a congenital quad amputee in a college physical education program. Shows procedures utilized for developing propulsive movement in water with use of various size swim fins and use of inner tube strapping to hold fins on upper arms as well as thighs. Reveals teaching techniques of arm and leg movement. Front dive, back dive, and flips are performed.

32. To Lighten the Shadows (16mm, sound, black/white, 20 minutes). Bert Lunan, Coordinator, Information Center-Recreation for the Handicapped, c/o Little Grassy Facilities, Southern Illinois University, Carbondale.

Build around the First Institute for Camp Directors and Staff held at Little Grassy Facilities, Southern Illinois University, Carbondale, (March 1963), this film combines scenes from institute sessions with planned activities for retarded youngsters. Boys and girls are seen in such typical camp activities as riding the bus to camp, arts and crafts, horseback riding, weiner roast, nature crafts, singing activities, fishing, self-testing activities, and circle games. Outstanding teachers from the field provide information about retardation, a rationale for recreation programming for retarded children, information about staff and leadership, and ideas about coordination between camp and home.

33. Tumbling "The Forward Roll" (16mm, sound color, 11 minutes). Martin Moyer Productions, 900 Federal Avenue East, Seattle, Washington, 98102.

Designed to encourage elementary classroom teachers to initiate a tumbling program. Shows the forward roll as an isolated and a progressive method of teaching. Activity develops into a tumbling unit based upon the roll.

34. You're It (16mm, sound, color, 25 minutes). Alden S. Gilmore or Thomas A. Rich, MacDonald Training Center, 4424 Tampa Bay Boulevard, Tampa, Florida, 33614.

Emphasizes the importance of recreation as a means of educating mentally retarded children. Discusses specific examples of how participation in recreational programs can contribute to physical growth, social development, more productive use of leisure time, and vocational placement. Includes methods of working with retarded youngsters in recreational programs, along with teaching hints and suggestions. Shows retarded youngsters of all ages participating in a variety of activities--e.g., hide and seek, softball, cheerleading, camping, swimming, dancing, square dancing, table tennis, pool, arts and crafts, and in passive activities as watching television and listening to music.

35. Therapy Through Play (16mm, sound, color, 27 minutes). Richard Switzer, Human Resources Center, Albertson, New York, 11507.

Shows physically handicapped children participating in a variety of physical activities. Children in wheelchairs are seen taking part in touch football, soccer, swimming, cage ball, miniature golf, bowling, relays, and fencing. Dictates integrating occupational therapy and physical therapy

through physical education and recreation. Shows a variety of adaptations and modifications in physical education along with ways in which other areas of the curriculum are approached--driver education, science, and home economics.

LISTING OF PERIODICALS FOR FUTURE REFERENCE

In reviewing the literature for this information guide, many sources offering physical activities, teaching suggestions, and other information helpful to individuals involved with disabled people were found in the following publications:

American Corrective Therapy
4910 Bayou Vista
Houston, Texas 77088

Journal published bimonthly by the American Corrective Therapy Association.

Subscription Price: Members - $10.00/per year
Non-members - $12.00/per year

American Journal of Mental Deficiency
5201 Connecticut Avenue, N. W.
Washington, D. C. 20015

Journal published bimonthly by the American Association on Mental Deficiency.

Cost: Institutes and Libraries - $40.00 per volume
$ 8.00 per copy
Non-Institutional - $20.00 per volume
$ 4.00 per copy

American Journal of Occupational Therapy
6000 Executive Boulevard
Rockville, Maryland 20852

Official publication of the American Occupational Therapy Association.

Subscription included in AOTA member's annual registration fee.
Individual Cost: Non-members - $10.50/per year
Institutions - $12.50/per year
Back Issues - $ 2.00

American Rehabilitation
Superintendent of Documents
U. S. Government Printing Office
Washington, D. C. 20402

Official bimonthly publication of the Rehabilitation Services Administration.

Subscription Price: $11.75/per year
$ 2.00/per copy

Children's House
Children's House, Inc.
Caldwell, New Jersey 07006

Published bimonthly.

Cost: One year charter subscriptions $5.50, plus postage.

Exceptional Children
1920 Association Drive
Reston, Virginia 22091

Official journal of the Council for Exceptional Children. Published September-May excluding December.

Cost: Members - $ 7.00
Non-members - $12.50
Single Copy - $ 2.00

Exceptional Parent
P. O. Box 964
Manchester, New Hampshire 03105

Cost: 3-Years (18 issues) - $24.00
2-Years (12 issues) - $18.00
1-Year (6 issues) - $10.00
Back Issues - $ 2.50

Journal for Special Educators of the Mentally Retarded
Box 171
Center Conway, New Hampshire 03813

The special educators magazine of the Academy of Educational Disciplines.

Cost: 1-Year (3 issues) - $9.00
Single Issue - $3.50

Journal of Health, Physical Education, and Recreation*
1201 Sixteenth Street, N. W.
Washington, D. C. 20036

Cost: Members (9 issues) Plus Update (9 issues) - $25.00/per year
Students (Undergraduate) - $12.50/per year
Institutions - $25.00/per year

*Now changed to Journal of Physical Education and Recreation.

Journal of Optometric Vision Development
Journal
5243 Chestnut Street
Philadelphia, Pennsylvania 19139

Journal of Special Education
3515 Woodhaven Road
Philadelphia, Pennsylvania 19154

Published quarterly.

Cost: Institutions - $12.00/per year
Individual - $12.00/per year
Students - $ 8.00/per year

Mental Retardation
5201 Connecticut Avenue, N. W.
Washington, D. C. 20015

Publication of American Association on Mental Deficiency.

Cost: Included in Membership Dues
Non-members - $22.00
Single Copy - $ 4.00

Motive
Ohio Department of Mental Health and Mental Retardation
Ohio Departments Building
Columbus, Ohio 45601

Bimonthly publication.

Cost: Free

New Outlook for the Blind
Information Department
15 West 16th Street
New York, New York 10011

Published monthly by American Foundation for the Blind.

Cost: 1-Year - $11.00
2-Years - $18.00
3-Years - $27.00
Single Copy - $ 1.25

Outdoor Recreation Action
Superintendent of Documents
U. S. Government Printing Office
Washington, D. C. 20402

Published by the U. S. Department of the Interior, Bureau of Outdoor Recreation.

Cost: 1-Year - $4.15
Single Copy - $1.10

Paraplegia News
935 Coastline Drive
Seal Beach, California 90740

Published by Paralyzed Veteran's of America, Inc.

Cost: 1-Year - $3.50
Single Copy - $ .30
Back Copy $ .50

Parks and Recreation
1601 North Kent Street
Arlington, Virginia 22209

Official publication of the N.R.P.A.

Cost: Members - $5.00 (Included in dues)
Non-members - $6.00
Single Copy - $1.50

Rehabilitation World
20 West 40th Street
New York, New York 10018

Cost: Distributed free to members.
Membership - $15.00

Teaching Exceptional Children
1920 Association Drive
Reston, Virginia 22091

Quarterly journal of the Council for Exceptional Children.

Cost: Members $4.00/per year
Non-members $7.50/per year
Single Copy - $2.20

Therapeutic Recreation Journal
1601 North Kent Street
Arlington, Virginia 22209

Quarterly journal.

Cost: Included in Professional Member Dues
Non-members - 1-Year - $ 8.00
2-Years - $14.00
3-Years - $20.00

Note: If ordering from a country other than the United States, Canada, or Mexico, subscription costs will be slightly higher.

SELECTED REPRINTED ACTIVITIES ARTICLES

The following set of reprinted articles have been especially selected on the following criteria:

Practicality--each article deals with either a specific activity or a certain disability. The purpose is to show how to do something (activity) and the disability the activity is best suited for is usually mentioned.

Adaptability--most activities presented in the articles lend themselves to adaptations for a variety of disabling conditions.

Uniqueness--hopefully these articles will serve as a base for innovation. The uniqueness will ellicit from the reader new ideas to be utilized in therapeutic recreation and adaptive physical education.

programs for handicapped

Teaching the Blind Student Archery Skills

DOROTHY HYMAN is an assistant professor at Glassboro State College, Glassboro, New Jersey.

Every student enrolled at Glassboro State College is required to take physical education for two years, including those students who are physically handicapped. The feeling in the Physical Education Department is that everyone should experience some form of physical activity, therefore, we have an Individualized Physical Education Program which meets twice a week for one hour.

One totally blind student walked into the class ready to participate in some type of activity. I was completely panic stricken. What could I offer this student? For the first several meetings we tried exercises and then bowling with a plastic ball and pins. Neither activity seemed to instill much interest or challenge to the student, therefore, once again I wondered what could I offer to the student. Could she be successful at archery? Why not try it.

The following procedure was used:

1. I obtained the right length arrows for my student and a light bow that she could pull. I had to consider the fact that what little strength she had in her shoulders and arms would be on the left side due to learning to get around with a cane.

2. I then proceeded to show her how to nock the bow to the arrow. In explaining the difference between the cock feather and the hen feather, it was just a matter of feel. She was also able to feel the nock indention.

3. At first the arrows were placed in front of her, which made it possible for her to pick them up without any difficulty. Evenutally the arrows were placed in a quiver, which was strapped around her waist. She was now able to manipulate the arrows as though she could see.

4. The next step was foot position. At this point it became quite apparent that if I could create an atmosphere of familiar surroundings for my student, she would begin to feel adequate. Therefore, it was necessary to construct a foot board that would put her feet and her body in the same aligned position with the target each time.

5. After her feet and body were in proper alignment, she was asked to nock the bow to the arrow. She then drew the bow until she felt the string touch her lips and her thumb was anchored to the jaw bone. These movements were done over and over again. Once more I waited for her to feel these movements. There were times that I had to hold the drawing arm in place for her and guide the bow arm in a straight up-and-down relationship to the floor. This was stopped when I saw that she was able to make these movements by herself.

6. When it came to the actual shooting of the arrow, direction now became a problem. Holding the bow arm straight up and down was an impossibility. Because of this, it was necessary for me to stand behind her and direct the arrows for her. This created no independence on the part of my student. Then too, after all the arrows were shot, I had to lead my student to the target and tell her where the arrows hit. Once again, there was no sense of achievement or independence.

7. Then I devised a tow line. A rope was suspended from the middle of the top of the target to a nail that was attached to her foot board. This had a two-fold purpose. My student was now able to walk to the target by herself and was able to keep the bow straight up and down by placing it against the rope.

8. To create more independence in my students, a system was devised so she could identify her own arrows as they hit the target. This was done by covering each color of the target with an unusual texture of material. The materials used were sandpaper for gold, satin for red, terry cloth for blue, cotton for black, and the white portion was left as is.

Now my student was able to approach the target, know how many arrows hit the target, and how many points she made. She would then go back to the foot board, record her score in braille, and be ready to begin the whole process all over again.

One score was three gold, two blue, and one miss out of six arrows. My student came to me and said, "you have given me an opportunity to gain self-confidence."

I cannot take full credit for this achievement. Without the cooperation of a fellow worker on the staff and the help of a member of the custodial staff, all of this would never have been accomplished.

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MOCK BASEBALL AND SCRUB

by

Joseph Lewis
Director of Recreation
Canadian National Institute for the Blind
Vancouver, B. C.

For the past two summers, much thought and effort has been given to the development of a form of baseball which would appeal to blind persons irrespective of age, state of health, playing experience or degree of vision.

Numerous experiments were conducted testing different ideas. These ideas included marking the ball with baseball symbols and setting out several marked pegboards with baseball symbols on each designating calls on each.

However, in these two systems, the element of luck overshadowed skill and as a result a third idea was tested which proved to be, by far, the most practical and successful.

We believe the game as outlined below will afford groups of blind participants many hours of friendly, exciting, and stimulating activity in outdoor programing.

EQUIPMENT Two sets of plastic bats and balls, one large and the other smaller, four bases, six markers, and a scoreboard.

VOLUNTEERS Five can handle adequately. An umpire who doubles as fielder at the plate, three outfielders, one scorekeeper.

BASIS OF PLAY Either team play with equal number of players on each team. Up to maximum of nine on each team for baseball; or, individual play in the game of scrub.

ARRANGEMENT OF EQUIPMENT Bases are set out as follows: Distance from homeplate to second base is seventy-five feet. Distance between 1st and 3rd bases is forty-five feet and these two bases are lined up fifty feet away from homeplate. This places 1st and 3rd bases closer to second base than to homeplate. Four markers are arranged in a row, fifteen feet apart and running from 1st to 3rd bases. This creates three openings, fifteen feet wide each. Another marker is placed just behind 2nd base and the last, twenty-five feet further back.

DEPLOYMENT OF VOLUNTEERS The umpire is near homeplate. His function is to determine the call. He also receives the ball from the outfielders and acts as an infield volunteer. He is eligible to catch pop flies. Two other volunteers take up their positior in front of the row of four markers. Their task is to prevent the ball from getting beyond the row of front markers. The fourth volunteer positions himself somewhere behind second base where he can best field any well hit ball and try to prevent a triple base hit or homer. Any fielder may stop the ball either on the ground on in flight. The fifth volunteer operates as scorekeeper and batting order.

METHOD OF PLAY Batter steps up to homeplate. Has choice of large or small bat. Holds ball in one hand and with bat in the other, attempts to hit the ball in one-handed style. Ball may be tossed up to hit but it is more advisable for batter to hit ball out of hand. If the ball goes outside either baseline, it is a "foul ball." If it is hit in the infield and does not reach the front row of markers, it is a "strike." If the ball is a "fly ball," and is caught by the fielder, it is an "out." If the ball is grounded through the centre opening of the front row of markers, it is a two base hit. If it goes throught the lst or 3rd base openings, it is a single base hit. If the ball goes beyond the last marker, it is a homerun. If a fielder attempting to catch a fly ball drops it, the call is determined by the spot where it rests and this is indicated by the markers. If it happens beyond the last marker, it is a homerun. Behind the 2nd base marker, it is a triple. Behind the front openings, it depends which opening as to whether it is a single or two base hit.

The umpire calls the play and is the final authority in any dispute.

In the case of base hits, the batter is guided to the base and moves from base to base as the game progresses. There is no running and the batter may request to be guided to bases as the course of the game requires.

FURTHER REMARKS The voluntcers can make the game attractive and pleasureful to the contestants if they understand their duties clearly and especially the scorekeeper who should keep the batters moving to homeplate without undue delay. A person with a loudhailer or small P.A. system can enhance the game by acting as a radio sports announcer covering the play and giving a running commentary.

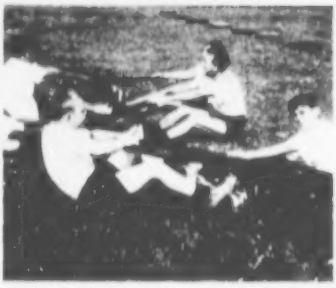
In our final experiment we even included the sale, at a nominal price, of popcorn and peanuts.

The foregoing may appear to be an involved and complicated effort to set up the game and get it into motion, but in actual fact once the volunteers are secured and briefed, the game moves into high gear very quickly.

It does not require too much of a clearing. The equipment is very inexpensive, A few volunteers can handle the entire event and a score of blind participants will enjoy a session of non-strenuous, stimulating activity plus considerable amusement and excitement.

NEW USES FOR OLD BICYCLE TIRES

William G. Emigh
Consultant, Physical Education for the Retarded
St. Clair County Intermediate School District
Port Huron, Michigan



"The best things in life are free!" And so it can be in physical education and recreation programs for the mentally retarded. Many constructive purposes in these programs can be achieved with inexpensive or free items—simple things like used bicycle tires. Each child can have his own bicycle tire and be active with little or no standing around, waiting for a turn. Activities can be selected so that each participant is challenged, no matter how inept and awkward, or skilled and graceful; activities can be extremely vigorous or downright passive; emphasis can be placed upon areas in need of greatest attention—gross motor abilities, fine motor skills, physical fitness, social awareness, emotional stability, or perceptual skills.

The following activities have been used by teachers of St. Clair County Intermediate School District and have been proven to be quite successful in fulfilling many of the objectives of physical education.

Tug-of-War:

Two Hands. Face each other, grasp the tire with both hands, and pull.

One Hand. Stand sideways to each other, grasp the tire with one hand, and pull.

One Hand, Hopping. Stand sideways to each other, grasp the tire with one hand, lift one leg, and, while hopping, try to pull the opponent toward you.

Two Hands, Back-to-Back. Stand back-to-back, bend down, place both hands between the knees, grasp the tire, and pull.

Back-to-Back. Stand in the tire, back-to-back, then hold the tire at hip level and walk away from your opponent.

Face-to-Face. Stand in the tire, face-to-face, then hold the tire at hip level and walk backwards.

Head-to-Head. Place the tire over both persons' heads, tilt heads slightly backwards, and pull, keeping hands clasped behind the back.

Relay Races:

One (Two) Tire Carry. Carry or drag the tire, in one hand or both hands, to a line, return in the same manner, and pass the tire to the next person in line.

Hip Carry. Place the tire over the head and at hip level. Hold the tire in this position while running to the line and back; then give the tire to the next person.

Foot Drag. Place the tire on the floor. With one foot inside the tire, drag it along the floor to a line and back, keeping the same foot inside the tire at all times.

Over-the-Head. Place the tire at the far end of the court. Run to the tire, pick it up, place it over the head and shoulders, and let it fall to the floor; touch a nearby wall and return to touch off the next player. Additional tires may be placed between starting and finish lines, so that the process must be repeated several times.

Exercise Activities

Place a tire on the floor in front of each student. Have students walk forward, backward, or sideways around their tires.

Have them put one foot *on* the tire and the other on the inside or outside. From the inside have them step forward, then backward, and sideways, then out, turn around, and step back into the tire.

Have them jump in and out of the tires in various ways. From outside the tire, have them jump forward, backward, and sideways across the tire. Have them jump in and out of opposite sides of the tire. Let them place both hands in the center of the tire and walk sideways around it, or place their feet in the center and walk with hands sideways around the outside of the tire.

A variety of games, calisthenics, and balance activities can be developed and effectively used with bicycle tires. The ingenuity and imagination of the instructor are all that limit the potential use of these easily obtainable items in physical education and recreation programs for the mentally retarded.

Editor's Note: "Exploring Movement Through Bicycle Tires," a 12-minute 16-mm, silent, black-and-white film, shows a wide range of creative and original ways to use bicycle tires in physical education and recreation programs. The film can be obtained from Dick Bergner, Greendale Public School, Greendale, Wisconsin 53220.

BOWLING FOR THE HANDICAPPED

by Robert D. Mason*

There is a definite trend today in Physical Education and Physical Therapy to develop methods and means that will enable the handicapped person to participate in some of the more common sports and recreational activities. Among the more adaptable of these is bowling. The wide use of ingenuity can make this game available to most any area of handicap. The following are suggestions for some of these areas:

BOWLING FOR THE BLIND - It is very difficult if not impossible for blind persons to visualize angles; therefore, it is imperative to develop a system whereby all shots will be in a straight line. The following systems are being used successfully:

A. Bowling with the "Rail" - (1) Strike Ball - Hook the crook of the elbow of the guiding arm over the rail, adjust rail position so that the ball is lined up with the center of the lane when hanging at the side of the bowler in his delivery hand. The rail will now remain in this position for all succeeding shots. (2) Left-side Spares - #4-7 and 8 pins. Hook rail under the arm pit of the guiding arm, this will line the delivery arm up with the above pins. (3) Right-side Spares - #6-9 and 10 pins. Hold rail in hand of guiding arm with the arm extended straight out to the side parallel to the floor. This will line up the delivery arm with the above pins. (4) Center Spares - Return to the strike or position #1, This position will cover the #1-2-3 and 5 pins.

B. Bowling without "Rail" - Many blind bowlers prefer not to use the rail. These people utilize the ball return as a starting position from which to adjust. This is accomplished by resting the leg against the side of the ball return and then side stepping to gain the proper position for various shots. Since the ball return is between the two lanes used in a match, this will entail using the left leg on the right lane and the right leg on the left lane. It is necessary to develop a uniform side step. The moves in this method are usually as follows: (Right Lane) rest left leg against the ball return, Strike Ball and/or Center Spares two side steps to the right. Right-side Spares, three side steps to the right. Left-side Spares, one side step to the right. When using the left-hand lane, the right leg will rest against the ball return. The Strike Ball or Center Spare move will remain the same, two side steps to the left. Left-hand Spares, three side steps to the left. Right-hand Spares, one side step to the left.

Assistance should be given the bowler when trying to establish the proper length of side step. After this the only assistance necessary is to guide them to the lane. These people develop a sense of hearing that can generally tell them approximately how many pins have been knocked down. Of course,

*American Junior Bowling Congress, 1572 E. Capitol Dr., Milwaukee, Wis. 53211

assistance is needed to call out the pins remaining. Some blind bowlers roll a hook ball; this creates an almost impossible problem in picking up the #6 or 10 pins. Try to develop a straight ball with the thumb of the bowling hand at about 12 o'clock at the time of delivery.

When teaching beginners, it is advisable to stand the person at the foul line in the proper position and deliver the ball with just a pendulum swing and no steps. This later can be developed into one, two, or three steps for an approach. The shorter the length of the step, the easier it is to maintain a straight line. Rolling the ball smoothly and slowly in the beginning is of the utmost importance, for as soon as the ball is thrown, or rolled too hard, the person has a tendency to pull the arm across the body and angle the ball.

For those not totally blind, stand them about two feet back of the foul line with the delivery arm in line with the center or "big" dot on the floor at the foul line. Make sure that their shoulders are square to the foul line and then let them roll over the center dot for the Strike Ball and Center Spares, the dot to the right of center for the #3-6 combination or the 6-9, move to the 2nd dot to the right of center for the #6 or the 6-10 combination. Use the dot to the left of center for the #2-4 combination or the #8 pin, second dot to left of center for the #4 pin or the 4-7 combination. In Halifax, Nova Scotia, I observed a man with impaired vision who refused any help; he used a pair of field glasses to determine the pins that remained standing and then used the adjustment method explained above. His average is 130.

WHEELCHAIR BOWLING - The basic concept of rolling the ball is the same, less the approach, of course. Establishments can aid bowlers by furnishing ramps down into the bowling areas and up to approaches. A wheelchair with a wheel locking facility is an advantage. The chair should also be equipped with an extra seat cushion to raise the bowler up so that where forearm is resting on the chair arm that forearm is parallel to the floor. A wedge cushion should also be used between non-throwing side of bowler and side of the chair so he does not slide when delivering the ball.

Most bowlers, when able, prefer to pick ball up off the ball return by themselves. They then roll chair up to the foul line, positioning themselves so when arm hangs over the side of the chair it is aligned with their "spot" on the lanes, and set brake. Rest the "throwing arm" in arm of wheelchair, palm up, ball in hand. Then push ball out to front and side away from wheel of the chair. The best results are gathered by rotating the wrist ¼ turn so that the back of the hand is next to the wheel on the back swing and continue this hand position forward until ball has passed "bottom dead center". For remainder of swing, rotate wrist until thumb is at about 9 or 10 o'clock position (right-hand bowler). This will produce a "hook" but is the easiest method so ball does not hit chair wheel. Spare shooting here as in "blind system" should be restricted to direct line (no

cross lane) shooting where possible, especially where it would be necessary for ball to cross in front of chair.

In some cases wheelchair bowlers are unable to handle the ball this well, particularly children. In such instances, a good method is to get a wooden, straight-back chair, attach a rubber covering to each leg of the chair and improvise a seat belt on the chair, place chair at foul line, pick up or aid bowler to chair, and strap seat belt across the bowler's lap. The chair should be low enough so that by leaning a bit, the bowler can pick the ball up off the floor. The bowler straightens up so that the ball clears the floor, then goes into a pendulum swing. It is necessary that an attendant hold the back of the chair down. In most cases of league or tournament bowling, special exceptions as to the rules are requested so that a bowler may roll three frames without moving since it is a major effort to get the bowler strapped into the chair.

A great precedent was set in the Missouri AJBC Tournament in 1964 when there were about eight teams of physically handicapped entered in the regular tournament. Not only was this a big lift for the handicapped, but it enlightened the normal youngsters.

CANES - Those able to walk with canes can easily bowl if a helper will take the ball to the foul line and set it on the floor next to the bowler's foot. The bowler normally forms a tripod with legs and one cane, reaches to the floor and picks up the ball while an attendant holds the second cane.

ADVANCED MUSCULAR DYSTROPHY CASES - There are some persons such as extreme muscular dystrophy cases where they have a minimum amount of strength or locomotor ability. For these people a ball drop can be developed. This ball drop is made of aluminum tubing similar to the ball drop at machines. It is placed on the approach. The direction which it aims is controlled by a small wheel on the side of the device. This wheel can be operated by very little movement. The ball is placed atop the ball drop by an attendant. The bowler pulls a release string when the device is properly aimed; the ball rolls down the tubing toward the pins. The elation observed when these patients hit the pins was fantastic.

Another improvision is a wooden or metal fixture that hooks over both arms of the wheelchair and slopes at about a thirty degree angle to the floor. The chair is placed sideways at the foul line. The fixture is then attached to both arms and sloped onto the lane bed. The bowler adjusts the chair to the best position, then pushes the ball from flat area across the two chair arms, down the slope and onward toward the pins.

USE OF FEET - It is possible to utilize the feet only, and it has been done in the case of double arm amputees. The ball is placed on the floor at the foul line resting on thumb hole. The bowler removes the shoe and sock from the "bowling foot" then, using the ball of the foot, propels the ball down the lane.

LITTER CASES - There are some cases where litter patients with some arm locomotion are placed on the approach face down on the litter, head towards the pins. Then placing the ball on the floor, resting on thumb hole, in front of the patient, the ball is pushed down the lane with a straight arm motion.

MENTALLY RETARDED - Bowling has proved to be a very popular activity among this group. There are so many degrees in this area that one simplified answer is not possible. One of the primary problem areas is the approach. Since this affliction generally affects the balance, it is necessary to use no steps in the approach, or develop the number of steps that can be mastered. It is more practical to take fewer steps and develop uniformity than to try to conform to the popular 3, 4 or 5 step normal approach concept.

A way to obtain excellent results in iniformity is to make a cutout in the shape of a foot, using a black poster paper. Tape this cutout at the foul line in good position for bowler to deliver the ball. Then make a second cutout in the shape of a face (about 4 x 4 inches). Tape this one on the lane bed about 5 to 7 feet out from foul line. Try to fold this so it will stand upright on the lane, and make it out of thin enough paper so it will not deflect the ball. By placing foot on cutout and shooting at second cutout, the direction gained by bowlers is 50% better than without these aids.

WEIGHT OF BALL - Bowling balls are manufactured in weights ranging from 6 to 16 pounds. Choosing the correct weight for each individual is a matter for the instructor. Here are some general hints: lighter weight balls are best for children and the more severely handicapped. The blind do better with a heavier ball (13-15 pounds). Persons using foot for delivery also do better with the heavier balls.

The "buddy" system is widely used. This entails using a normal person as a buddy for the handicapped and bowling with them. They can help with the wheelchairs, or help the blind by helping with the ball and positioning.

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Programs for the Handicapped
1201 16th Street N.W.
Washington, D.C. 20036

1000-5/69

TRY IT!

3. Balance Beam
Hoola Hoops
Circuit Training

DEVELOPMENTAL ACTIVITIES

Marshall Peterson
Special Education Department
Northern Illinois University
DeKalb, Illinois

MANY MENTALLY RETARDED children exhibit difficulties when performing activities which require balance. Balance is a foundation for more complex motor activities which include various kinds of agility tasks such as throwing, catching, running, and skipping. Without a firm foundation of balance, these more complex activities may present extreme problems for the retarded child.

When working on balance activities with retarded children, all activities to be taught on the beam can and may have to be taught on the floor first. It is of utmost importance that these balance activities be motivational in nature.

The following motivational balance activities may be adapted according to the needs of the children involved.

- Crawl across the beam.
- Sit on the beam without touching the floor.
- Roll a ball across the beam to a partner.
- Balance a bean bag on various parts of the body while crossing the beam.
- Pick up various objects from the beam while maintaining balance.
- Catch medicine balls while in various positions on the beam.
- Keep It Up volleyball drill with a partner using a volleyball or a balloon.
- Balance on one foot (then the other foot).
- Carry (spin) hoola hoops on extended arms (legs) while crossing the beam.
- Step through hoola hoops placed at different levels.
- Walk under (over) wands (sticks, dowels) placed at different levels.
- Step into hoops placed on the beam; bend down and pick up each hoop.
- Toss and catch hoops; have partners toss and catch hoops.
- Walk across beam with hoop and step through it.
- Carry Ping Pong balls in spoons while crossing the beam.
- Bounce and catch balls on the floor while maintaining balance (moving) on the beam.
- Bounce and catch balls off the beam's surface.
- Carry medicine balls or bleach bottles filled with sand across the beam.
- Include the balance beam in obstacle course activities.
- Place footprints on the surface of the beam for various movements to be executed.
- Include team contests; use two beams and have opposing teams bounce balls back and forth to determine which team can keep all of its members on the beam the longer time. Use other items for this activity such as hoola hoops, bean bags, and medicine balls.
- Encourage the children to create and develop activities they have never seen performed on the balance beam. Provide opportunities for problem solving and creative thought through such games as follow the leader and add-on (a child performs some stunt or activity; the next child does this plus another that he adds on; each child then does what all others have done plus a new one).

HOOLA HOOP

Hoola hoops[1] have been beneficial in helping retarded children develop agility and coordination. Hoops can be placed on the floor in various patterns according to the ability of the students; space between hoops may be altered depending upon the size and ability of the child. The child is asked to place feet in each hoop as he progresses from walking to running, jumping, hopping, skipping, and leaping. Possible patterns include:

Additional Techniques

- Color code the feet to the child to correspond with the color of the hoop to help reinforce correct foot placement. Use crepe paper tied around the ankles, small squares of paper placed on the toes, colored socks, cloth garters, or anklets to designate correct foot placement.
- Use footprints of various primary colors to help develop agility and to reinforce color discrimination. Footprints may be painted on the floor with tempera, made from construction paper and taped on the floor, cut from colored tape, constructed from contact paper, cut from carpet runner, or made from similar easily obtained materials.
- Footprints can be used to help in movements onto, across, and from balance beams or walking boards. Students walk, jump, and balance while following footprints across the balance beam, concluding with steps across the midline of the body. Other locomotor movements can be introduced by changing the patterns of the footprints.

Variations

- Incorporate handprints into the patterns.
- Include the prints as part of an obstacle course.
- Use these activities as lead-ups for hopscotch and related games.

[1] Bicycle tires, automobile tires, garden hose made into hoops and secured with wooden dowels, rope, circles painted on the floor or all surface area, or circles cut from contact paper or similar substances can be substituted for hoops.

CIRCUIT TRAINING

Circuit training is an excellent method for developing locomotor strength and endurance. A circuit consists of a series of activities at various stations which must be completed as quickly as possible. A gymnasium is an ideal area to conduct such a program but it may also be conducted in a classroom with running activities eliminated.

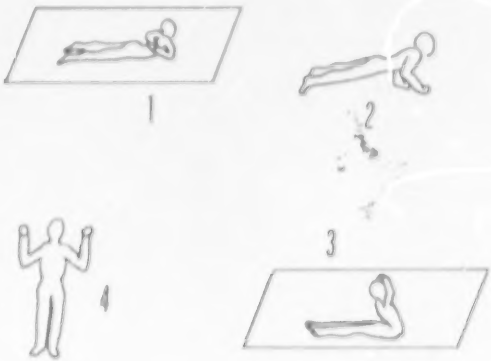
Varying levels of physical fitness may make it necessary to classify children into various ability levels such as:

AAA – any child awarded a fitness badge on the Special Fitness Test for the Metally Retarded.[1]

AA – any child scoring between the 30th and 50th percentiles on the Special Fitness Test.

A – any child with severe motor and agility problems.

A circuit may consist of four to six stations with specific activities conducted at each station. For example, in a four station circuit, activities might be: (1) reverse sit-ups; (2) push-ups; (3) sit-ups; and (4) jump and reach.



Each child runs the circuit three times with children classified as AAA executing four repetitions at each station; those classified as AA executing three repetitions; and children classified as A doing two repetitions. At the end of each week (session) repetitions may be increased for each individual according to his progress and achievement.

Procedures and techniques which add to the benefits of circuit training include:

- Let each child have a partner to help with exercises.
- Do exercises to music.
- Encourage children to *beat* their previous time for three circuits.
- Provide duplicate stations for activities which may cause tie-ups and cause children to wait for others to finish.
- Establish various skill learning stations such as ones for ball handling, recreational activities, racket skills, exploratory activities, bowling skills.

[1] *Special Fitness Test Manual for the Mentally Retarded*. Washington, D.C.: American Association for Health, Physical Education, and Recreation. 1968. (242-07906, $1.00)

More than 600 mentally and physically handicapped children come to the University of New Mexico campus every week to clamber over, under, through, around, in, out, up, and down special criss-crosses and curves of steel. The kids love the collection of green and grey steel shapes which make up this special playground. Researchers specializing in rehabilitation of the mentally retarded and physically handicapped learn invaluable information by watching.

Frank Papcsy, associate professor of physical education and special education and director of therapeutic programs at UNM believes that handicapped children rarely get opportunities for the physical and social training offered by a playground. He indicated, "In regular schools they must compete with so-called normal children; it's unequal competition. The retarded child is either too shy or lacks the skill to compete. What we hope to do with this playground is offer necessary social and physical training for retarded children and observe what kinds of equipment best suit the needs of the retarded and other handicapped."

OVER AND UNDER - UP AND DOWN -

Included on the playground is a progression of climbing, high bar with alternating rings. A child can climb, hand and foot, to the top and down again. From there he goes on to more complex equipment. An outdoor gymnasium combines the traditional jungle gym, horizontal bars for hand-over-hand climbing or, for the braver, balancing, and a variety of strength and coordination opportunities.

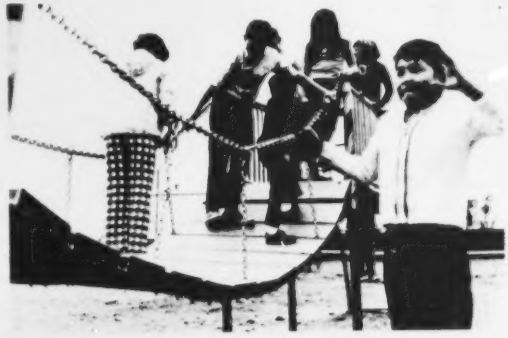
One of the devices is a twenty-foot long bridge with two starting points. The less aggressive and uncertain child will chose to walk up five traditional steps to the beginning of the bridge proper. He holds on to the chains on each side of the bridge for balance. The bridge itself has separate wooden boards connected by rope so that the bridge sways as a child walks across. The more adventurous child starts his walk by climbing up a series of curved bars and approaches the swaying bridge from a steep angle. It looks easy—until you try it!

Children from UNM's Saturday morning mentally retarded motor skill training class, the daily university course for children with learning disabilities, and kids from Manzanita Center use the playground with members of Papcsy's staff and graduate students supervising and taking research notes. The kids are turned loose on the playground without any prior training. Notes are made about the equipment they use and how they use it. Intensive training in motor skills is then given. After this the children return to the playground and are again observed to see what equipment they use and how they use it, and to determine why changes in usage, if any, have occurred. In addition, children are watched to see whether they have improved peer group relationships after playground participation.

Students are building more specialized kinds of equipment to test specific muscles and types of coordination. In addition, UNM physical education majors are repainting much of the equipment to see whether color influences usage. "So many factors enter into the handicapped child's life that we cannot ignore anything," Dr. Papcsy says. "If color, location on the playground, height, or complexity have any effect on equipment use and subsequent physical and social development of the child, we want to know about it."

Dr. Papcsy and his staff haven't compiled all of their results yet because the research is a continuing project. But one thing's for sure—that playground is a nice place to be around mid-mornings!

IN AND OUT



RECREATION AND FITNESS FOR THE MENTALLY RETARDED

AMERICAN ASSOCIATION FOR HEALTH PHYSICAL EDUCATION AND RECREATION

Challenge

SEPTEMBER 1969

Teaching the Severely Retarded to Use Playground Equipment

FRANCES A. GROVE AND CHARLES V. KEERAN, JR., PACIFIC STATE HOSPITAL, POMONA, CALIFORNIA

Ordinarily, playground equipment is a source of fun and satisfaction to children and it can aid their physical development. However, few severely or profoundly retarded, especially residents of institutions, know how to use playground equipment. At Pacific State Hospital, although playgrounds were available, they were rarely used by severely and profoundly retarded residents because of the staff's general skepticism about their ability to learn to use the equipment. Traditional training techniques did little to dispel this attitude, and more capable patients received the majority of the staff's attention.

With the awarding of a Hospital Improvement grant, the hospital administration looked to the Rehabilitation Services staff for techniques to teach therapeutic recreation activities and games involving educational toys and playground equipment. To be completely honest, we didn't know techniques for teaching the severely retarded; this is an account of our efforts in meeting the challenge.

We started by observing the patients and having seemingly endless interdisciplinary discussions about their needs and capabilities. The largest common denominator seemed to be their relative freedom from limiting physical disorders. However, patients were wardbound and needed to participate in outdoor activities. They needed to develop gross motor coordination, muscular endurance, and body strength, especially through active use of their arms and legs. They had to be taught to climb, swing, slide, grasp, and to hold objects. They lacked opportunities to have successful experiences in following simple directions and in completing specific tasks. They needed to have activities for just plain fun—pleasurable enough to motivate them to want to participate on their own and for their own enjoyment.

Once needs were identified we had to translate them into activity programs. Many activities could have been undertaken with limited resources; HIP funds made possible a broader range of activities and approaches. We attempted to relate facilities and equipment to program needs and to include active participation as a part of every patient's daily experiences.

Primary goals of the program were to motivate patients to use playground equipment and to teach them to have fun

so they would know how to play effectively. This dictated certain equipment requirements—equipment that patients could learn to use (there was no point in obtaining items that would be beyond their comprehension); enough units so each patient could always participate (this group didn't understand the concept of taking turns and couldn't tolerate waiting—they either lost interest or ran right over the patients ahead of them); variety of equipment so patients could readily move from one item to another (short attention spans demanded this); items which were appropriate for patients functioning at different developmental levels.

Playground items determined most suitable for Pacific included tilt or regular merry-go-rounds, swing sets with at least six swings, simple climbers, tunnels three feet in diameter, and two types of slides. Standard playground equipment met all criteria, with one exception—a number of patients were fearful about the climbing ladder of the standard slide. It was necessary to obtain a special stairway slide—five feet wide, five feet high, equipped with a handrail. This unit was not as frightening, since the stairway

(Continued on page 6)

Teaching the Severely Retarded to Use Playground Equipment

width and handrail allowed a psychiatric technician or recreation therapist to be at the patient's side during the activity. After this slide was mastered, patients progressed to a standard slide.

Step-by-step progressions, supervised closely by skilled employees, permitted patients to move from fenced to non-fenced areas. This was made easier with some tangible delineation of the playground area — shrubbery, the side of a hill, the wall of a building, a walk, or the difference between a surfaced area and a lawn.

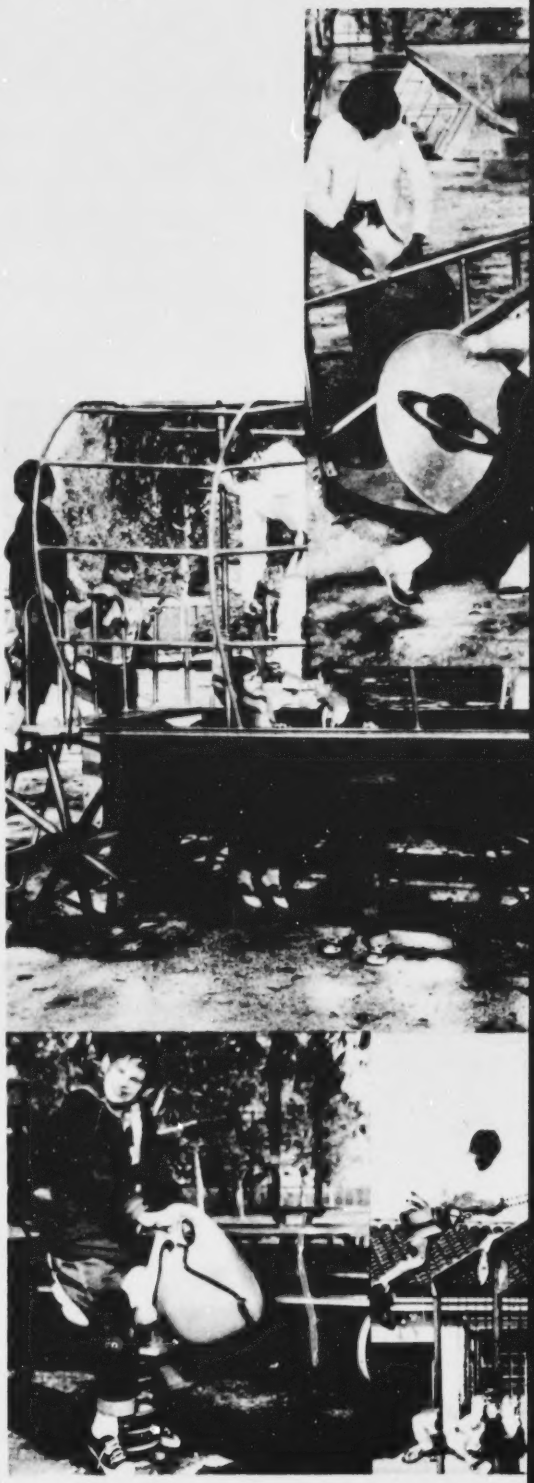
Integrating playground experiences into ward programs was essential. Since the Rehabilitation Services staff was (and still is) limited in size, it was apparent that the majority of the activity program would have to be carried out by psychiatric technicians who provided day-to-day care and treatment for patients. Therefore, ward charges (attendants) were vital links between recreation therapists and psychiatric technicians. Ward charges worked closely with recreation therapists in planning and scheduling the program, evaluating the training needs of psychiatric technicians, and suggesting pertinent methods of meeting these needs.

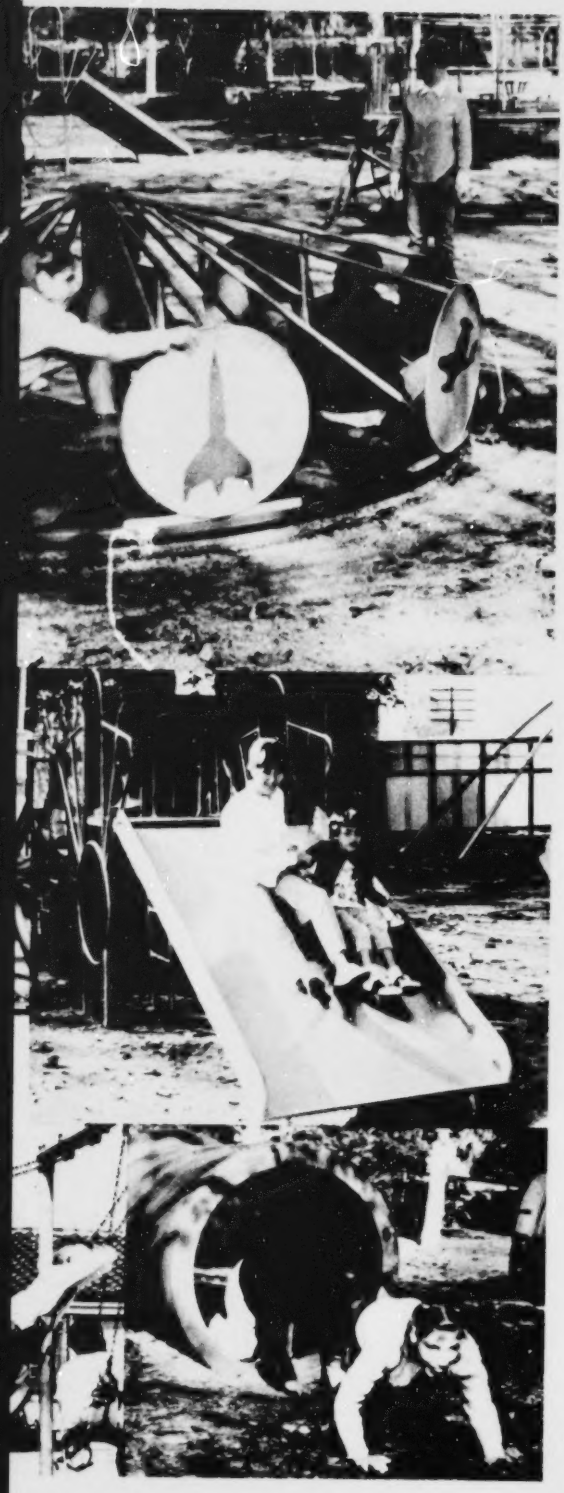
Training classes were instituted for psychiatric technicians. These classes, led by recreation therapists, consisted of group discussions which attempted to link patient needs with activity techniques. Certain principles guided deliberations: people live up to their expected social roles; patient motivation is greater and learning occurs more quickly through personal contact and demonstration than through verbal instruction alone; tasks should be broken down and taught in small step-by-step increments.

All employees were encouraged to identify potential problems and to propose solutions. One very practical problem was identified early—requiring regulation white uniforms during activity sessions. A number of technicians felt it would be very difficult to "do and show" on a climber or push a merry-go-round in a skirt, particularly a white skirt. Permission was obtained for personnel to wear appropriate recreational clothing, such as slacks.

Psychiatric technicians' feelings and attitudes were critical factors since patient attitudes clearly mirrored those of the technicians. Every effort was made to make the program and its objectives vivid and rewarding to each psychiatric technician. "Do and show" wasn't limited to the technicians' technique with patients. Recreation therapists soon learned that technicians grasped concepts more quickly and accepted the program more readily when therapists rolled up their sleeves and joined them in activities. For example, after a patient climbed the slide stairway by himself, he had the reassurance of an affectionate pat from his technician as he sat on the slide, and a cookie was offered by the therapist if he would come down the slide alone.

Little by little we realized that the psychiatric technician's job satisfaction was often thwarted because he expected too much or too little from patients. A playground rating scale —simple checksheets—helped solve this problem. Tech-





nicians completed checksheets for each piece of equipment at the beginning of the program and at various intervals during the program. Ratings reflected a patient's progress in specific skills, along with his speed of learning. In addition, they suggested next steps, which established more realistic expectations for technicians. Checksheets had other virtues—they permitted objective comparison of a patient's performance with that of his group. They facilitated communication between personnel on different shifts, thus promoting continuity of experience for patients. In many ways these checksheets became the backbone of the program.

We learned many techniques together. Some children needed considerable assistance in climbing, but others needed a socially acceptable place and time to climb. At the beginning of the project, running away and climbing over fences or onto tile roofs were problems, so that some patients could not be allowed outdoors without special supervision.

Effective motivation was relatively simple—participating in activities with patients and expressing pleasure and enthusiasm over their progress and accomplishments. A well-timed smile, calling a patient by name, punctuated with "good girl" or "good boy," and patting or hugging him when he completed a task were all well received. Cookies, candy, and crackers that were manageable on the playground were also used successfully.

Psychiatric technicians had to be agile as well as enthusiastic to stand on top of a climber with a cookie reward for a patient who slowly climbed up to get it. They learned to allow children to experiment in activities and on equipment. Procedures and checksheets became flexible so that a nonconformist would swing on his stomach or come down a slide on his stomach. It was discovered that gently pushing a child in a swing often enticed a nonswinger to try, so that he could reap a little of that ever-so-important special attention and praise.

Encouraging novices on a slide sometimes made them anxious; they were eager to get it over with and would want to go down without looking. Therapists had to be on their supervisory toes to prevent two or more children from colliding. Good supervision was a key to success, since taking turns and watching out for others was difficult for these youngsters to remember, even when they knew the skills.

We assumed that technicians would soon be able to conduct activities on their own, and to an extent this was true. However, certain activities required the supervision of more than one person, so it was necessary for recreation therapists to be readily available to help and consult. Originally, only the most skilled recreation therapists were assigned to the project; with time, we found that sensitive college students could serve very capably as activity therapists.

Observations and data show that a much higher percentage of children now use facilities and equipment away from their wards. They are more alert to their environment, make voluntary use of various pieces of playground equipment, and are more interested in playing with their peers. Skills learned on the playground are being used in other situations, as in the canteen, where steps have been negotiated with little employee assistance. Patients now enjoy unfenced lawn areas under big shade trees. Stepping on and off the tram by themselves is important, since a ride back to the ward on the tram is even more fun after climbing and swinging at Kiddyland Park. The program has been successful.

programs for handicapped

Physical Education for Orthopedically Handicapped Children

MILTON H. PETTIT, remedial physical education specialist in the Chula Vista (California) City School District, prepared this material on physical education for orthopedically handicapped children. He describes a program in archery offered in a special school, and an activity day in which orthopedically handicapped children competed.

Man moves and is active because of an inherent desire to do so. Early man moved and achieved movement proficiency or perished. Modern man moves and exercises, not for physical survival against the elements, but for myriad complex reasons. Preschool and elementary school children participate in movement exploration and physical activities as a way to learn about themselves and their environment; this is a time for them to acquire motor skill, physical proficiency, and a solid foundation of movement patterns *while having fun*. Secondary school students find themselves involved in physical activity programs for a variety of sophisticated purposes and for very personal reasons. Movement activity can contribute to one's feelings of self-worth and self-fulfillment, help him achieve social recognition, provide him with opportunities to attain personal satisfaction, and enable him to interact socially with others.

Physically impaired and orthopedically handicapped boys and girls have the same drives, feelings, emotions, and needs for regular physical activity as their nondisabled peers and contemporaries. Too many of these children do not receive adequate opportunities to participate in well-rounded physical education programs and movement activities suited to their needs, interests, and abilities.

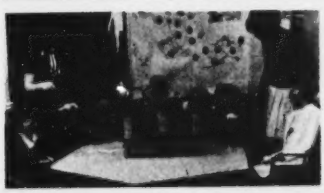
Physical education programs can include diverse activities for orthopedically handicapped students whether they are housed in regular or special schools, day care centers, or residential facilities. These children are aware of sports and athletic activities, opportunities, and experiences provided students in regular elementary and secondary schools; they learn easily from siblings and neighborhood playmates. Orthopedically handicapped children want, need, and deserve chances to participate in adapted baseball, softball, basketball, football, soccer, archery, bowling, ping pong, tumbling, and trampolining, as well as a myriad of other team, dual, and individual activities. They need opportunities to explore through movement and to develop a foundation of fundamental motor skills and movement patterns consistent with their conditions.

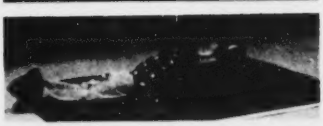
A well constructed and carefully adapted physical education program provides handicapped children with opportunities for new experiences, enables them to extend their horizons, and makes them feel more a part of (rather than apart from) the class, school, and community. Greater social awareness, improved human relationships, and more emotional stability can be developed and enhanced through group, dual, and individual activities; children learn to be governed by rules and regulations that apply to all participants. Sportsmanship, team cooperation, and group consciousness are integral parts of physical education programs for orthopedically handicapped children. The more ingenuity that physical educators use in presenting a varied program of activities, the greater the chance that orthopedically handicapped children will find activities in which they can succeed, achieve, and have fun—and the more they will feel like one of the gang.

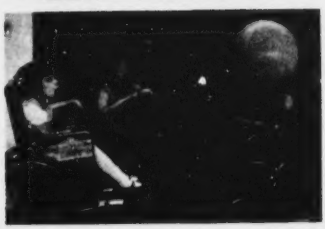
Some handicapped children are not provided games and activities that are consistent with their age, experience, abilities, background, and interests; too often offerings are programs in name only, with little to challenge, stimulate, motivate, and satisfy participants. Activities for the handicapped should be enjoyable, allow for movement and exploration to the child's maximum potential, be meaningful and relevant—and they should be fun. Carry-over activities—lifetime sports skills—such as archery, bowling, swimming, billiards, volleyball, and badminton are as important for handicapped students in special schools as for those in regular schools.

Orthopedically handicapped children who participate in a wide range of activities and movement patterns progress at their own speed, achieve varying degrees of skill and social awareness, and derive a variety of specific benefits. For example, many handicapped children seem to have low opinions of themselves in terms of their academic and physical performances; self-confidence and personal esteem, in some instances, have reached rock bottom. Active participation in a *thoughtfully* constructed physical education program may help a child develop self-confidence through success. Every child, no matter how severely involved, can be given a chance to succeed on the playing field, in the gymnasium, or in the swimming pool. This success may carry over to the classroom and to real life situations.

Handicapped children who participate in adapted physical education programs become increasingly aware of others; they learn to win and lose, to







balloons

Balloons have many qualities which make them excellent devices for teaching physical-motor skills: color, tendency to fall slowly and move short distances when hit, inexpensiveness, and natural appeal, especially to children. Any formation—scatter, circle, single or double line, open or closed, standing or sitting—can be used to introduce balloons to groups. Skills to be taught and skill level of each child influence the size of balloon which can be used.

At left, children use balloons in modified basketball, creeping across a mat while pushing a balloon, and modified tetherball.

An article offering suggestions for using balloons in teaching hand-eye coordination and other skills appeared in the May-June 1970 issue of *Challenge*.

succeed and fail, through individual and group activity and competition. Social interaction and social awareness of the children improve; sportsmanship and cooperation become meaningful experiences, not merely words and abstract concepts; children learn to respect the rights of others.

It is generally agreed that handicapped children have poor conception of time and space, of body image, and of many other perceptual concepts. Students can improve these characteristics and traits through a comprehensive physical education program which includes activities that incorporate the use of balance boards, balance beams, obstacle/confidence courses, tumbling, trampolining, and swimming. Improved body image and perceptual-motor function can positively affect each child in many other ways—intellectually, socially, emotionally, and academically.

Many orthopedically handicapped children sit all day; some stay at home, watch television, and feel sorry for themselves. They need to become involved, get active—get off their chairs, onto tumbling mats, and into the action. They need to leave their homes, go to the bowling alley and to participate.

Teamwork and cooperation among all concerned—physician, parent, administrator, therapist, teacher, and child—are of utmost importance to the success of the program. All personnel must become aware of the possible range of activities in which orthopedically handicapped children may be proficient. Schools—regular and special—must provide trained and experienced physical educators to plan, conduct, and evaluate these programs. Necessary equipment—mats, trampolines, billiard tables, ping pong tables, swimming pools—must be made available for programs.

Methods of Class Organization

The most basic organization involves a single class with a maximum of 15 children and two adults. Individual, dual, and team activities can be introduced by dividing a class into two sections with an adult supervising and providing individual instruction to each group. Skills, patterns, and movements can be taught by the part method and then consolidated when possible.

A second type of class organization combines two classes with four adults. Group activities such as baseball, softball, or basketball can be taught while sufficient personnel are available to teach individual and dual activities and to conduct tournaments. This organizational pattern permits equitable and safe integration of classes of severely involved with classes of children who are relatively active and mobile. Evenly matched teams of severely, moderately, and mildly handicapped greatly increase participant interest and enthusiasm.

Both types of class organization allow for concurrent instruction. However, the second approach permits more latitude for children who are not participating in a given activity. While four or five children are being given instruction—for example, on the trampoline—others may be formed into teams and be supervised by a teacher and two assistants or aides.

General Teaching Considerations

- Activities must be presented to orthopedically handicapped children in a simple and forthright manner. Many of these children understand complex discussions of rules, strategies, courtesies, and related topics. Others, due to type and severity of condition, need to be given easily understandable game and skill instructions.
- Some children must be taken mechanically through a movement, pattern, or skill; body parts are actually moved through desired patterns. Teachers must determine the types of skills and games to be used on the basis of the abilities of individuals and the group composition of their classes.
- Teachers must have a thorough knowledge of a large number of games so that activities can be quickly and easily adapted to individual and group abilities.
- Basic skills can be taught at every ability level to help each child acquire more proficiency and to stimulate interest in activities. Consideration should be given to all levels of activities, skills, and interests each child can pursue during his free, leisure, and uncommitted times.
- Class participation should provide each child with an improved feeling of self-confidence to help him evaluate and reevaluate his potential for the future. Healthy attitudes toward oneself allow for more positive self-reidentification.

Archery

Archery is an example of a carry-over recreational activity that has been accepted enthusiastically by orthopedically handicapped children attending Cypress Orthopedic School in Ontario, California. These students really enjoy archery, continue to progress and succeed, and reflect positively upon their individual accomplishments. Many children frequently ask when they are going to have another chance with a bow and arrow. Some students have fine motor ability and coordination; others have extremely limited ability, but all take part in archery.

To put the nock of an arrow onto a bowstring requires visual-motor proficiency and specific motor coordination; each child works on fine motor skills while he enjoys a fun sports activity. Archery forces the child to focus visually on a particular point and to make necessary adjustments to get the arrow properly placed on the bowstring so that he will be on target and eventually hit the bullseye.

Before any child actually shoots, safety precautions, rules, and regulations are discussed; a demonstration is included to show safety in action. Each child must clearly understand what is expected of him and understand factors involved in safe shooting.

For all intents and purposes the archery program is individualized to meet the needs of each child with general or specific physically handicapping conditions. The instructor usually works with three students at a time; other activities go on simultaneously under the direction of another instructor. This allows for close supervision and ensures individualized skill instruction. The archery instructor works with between 10 and 15 youngsters per half-hour physical education period. Each group of three usually consists of two students who function somewhat independently and one who needs special attention, often on a one-to-one basis.

Each archer starts about six feet from a 48-inch target. Most children can hit the target from this distance and therefore feel that they have succeeded and accomplished. As individuals become more highly skilled they move farther away from the target so that they are confronted with increasingly greater challenges; children with less ability stay close to the target.

Instruction varies greatly with the type of orthopedic condition. For example, the instructor holds the bow for a youngster with muscular dystrophy—the child places the arrow, pulls the bowstring, and releases; the instructor can help a great deal with aiming. The instructor can hold the bow for individuals who are unable to use one side of their body. Some excellent archers have a fine pull and release with one arm and hand, but are unable to hold the bow in the other hand because of paralysis or other disability. Each child, regardless of the severity of his condition, is encouraged to do as much for himself as possible. Large, toothy smiles frequently occur when a child puts an arrow into the target for the first or umpteenth time. Interest in archery is maintained through fun and success; no one has to tell the child about success—he can see and feel it. A great deal of praise is given individual children for their efforts and for what they do; skill deficiencies and irregularities which result from particular conditions are ignored.

Activity Day at Cypress Orthopedic School

As nearly as possible, all basic archery skills are taught, but the impossible is not expected. Each youngster is encouraged to become proficient in one or more of the fundamental archery skills. For example, the instructor holds the bow, helps the child nock the arrow, and pulls the bowstring back with the athetoid child who is unable to control his body movements. This is a necessary, yet companionable, cooperation and interaction of two individuals, the youngster and instructor think of a desirable result and work together to attain success for the child.

Great interest has been shown in the archery program because

- Each youngster is successful.
- It is a new sport activity which challenges each child.
- Each child is praised and given constant positive verbal reinforcement.

Activity Day

A play day was scheduled in conjunction with other May Day activities at Cypress Orthopedic School. Initially the upper-age group was not particularly impressed with the name "play day", so the name was changed to "activity day", which they accepted.

The staff felt that all children, including the orthopedically handicapped, should have opportunities to participate in competitive activities and to be winners. Most of these youngsters, because of their conditions, had been deprived of such experiences. A structured program was developed which was stacked in favor of each participant. Every child, in one way or another, was to have some degree of success and to win. A spirit of friendly competition developed and was promulgated throughout all activities. Expressions on the childrens' faces during the awards assembly indicated their accomplishments and feelings; activity day was a great success.

It was essential that the entire school staff—teachers, assistants, aides, and therapists—be involved in planning and conducting the activity day. Without everyone's support and cooperation, an undertaking as large as this could not have been successfully conducted.

- Two teachers developed a general list of activities for particular grade levels; one developed a plan for older children and the other a plan for younger children.
- The director, assisted by other teachers and therapists, outlined an extensive list of activities for each age group. A varied schedule of activities was developed so that all children, regardless of condition, could participate in the majority of the activities.
- Pre-school children remained under the direction of their individual classroom teachers.
- The program included both indoor and outdoor activities, with rest periods when appropriate.

Festivities started at 9:40 am and concluded at 11:00 am. The total time block of one hour and 20 minutes was divided into eight 10-minute periods with four different activities planned for each 10-minute period. Children could sign up for one activity in each 10-minute period, but could not sign up for more than seven of the eight time slots. Each time slot had one fairly difficult event, an easy one, and two moderately difficult ones. Mildly, moderately, and severely handicapped children were challenged and able to participate according to their conditions and abilities.

Two activity schedules—one for upper grades and one for lower grades—were mimeographed and distributed to all classroom teachers, who gave one to each child. Rules, regulations, and procedures were discussed; each event was explained; children's questions were answered; each child checked activities in which he wanted to participate.

Examples of Activities

25-yard dash
Wheelchair beanbag race
(beanbag on head)
Beanbag toss into tire
Hockey golf
Balloon bounce
Basketball free throw
Gunny sack race
75-yard dash
Ball throw at Bo Bo
Hopping relay
Basketball bouncing
Kick for distance
Golf putting
Football throw for distance
25-yard crutch walking race
Obstacle course on grass (timed)
Form board puzzle
Fire engine relay

Classroom teachers returned completed sign-up sheets to the director, who, with supervising teachers, placed children in heats for each event. Every heat was limited to four participants, with children grouped according to ability to keep competition even, fair, and keen.

As each child was placed in heats his name was written on a piece of gum-backed paper—red for upper grades or green for lower grades. Times and places of each child's activities were listed below his name so that there was no doubt where each child was supposed to be at a given time. These strips were placed on each child for activity day, greatly alleviating the problem of knowing where a child should be.

The playground area was marked into eight separate stations. A map, including the names of individuals supervising each activity, was drawn to show the

eight stations and their locations. Four stations were for the upper grades and four for the lower grades; each station had at least one activity supervisor. If an activity at a particular station bogged down, another person was quickly moved to that station to ensure that the activity ended within the 10-minute time limit. Individual classroom assistants were responsible for getting children from station to station within the prescribed time. Without the cooperative efforts and excellent jobs of these assistants, the activity schedule would have lagged far behind.

One person was assigned to take result sheets from each station to typists who typed final results by events. Typists also had a manual timer which went off every ten minutes to signify that it was time to change events. Participants rotated to the next scheduled station to the melodious strains of a loud *cowbell!*

Equipment lists were detailed for each station so that on activity day numbered boxes could be placed at the appropriate stations.

All interested persons were invited and encouraged to attend activity day. A fine turnout of parents responded to two colorful and imaginative invitations. A local newspaperman covered the events and was responsible for an article and pictures which appeared in a local paper.

Award certificates were given for all places—first, second, third, and fourth. Each child placed in every event he entered. Certificates were simple, but cherished. Each certificate had an appropriate colored ribbon—first place also had a gold seal—and were signed by the principal of the school and the activity day director.

Activity day was a success. It gave orthopedically handicapped children opportunities to compete, to be successful, to win, and to gain peer recognition. All the children enjoyed themselves and had fun and a rewarding experience. Parents and members of the staff were impressed with the spirit of friendly competition that prevailed; some were pleasantly surprised at the level of accomplishment which orthopedically handicapped children achieved. Many of the participants, for the first time, had a chance to achieve at a level worthy of tangible recognition. It was all worthwhile, rewarding, and a many-splendored thing.

may actually feel! You see, you already know the moon is round. I need to feel objects that will help me to know this. I need to feel a basketball, a softball, and eventually I too will look at the moon and feel that it is also round.

If you present opportunities for me to move in many ways and for many reasons, I can develop my sensory modalities: Jean Piaget said that even the most elementary type of perceptual knowledge is the result of a constructive activity of the organism in interaction with sensory data.[1]

I, too, believe that activity of a physical type—which involves exploration aimed at extracting information from objects themselves such as colors, forms, weights—is vital for my developmental growth. I also know that an organism cannot respond to a stimulus unless the stimulus is at least in some rudimentary way meaningful. This means that by manipulating my body in many positions I can learn through movement experiences to determine relationships of space, time, distance, flight, force, and gravity.

I have watched other children and I know that it's fun to run, hop, skip, leap, and walk and in so doing utilize locomotor movements that can help me perform the everyday tasks of living. I also know that in order to start me where I am to learn to move, I need to increase my own capabilities for movement by developing my cardiovascular efficiency, muscular strength and endurance, and flexibility. This will also help me to attain my optimum health.

Perhaps you weren't aware that you can motivate and challenge me through an array of movement experiences so that my cognitive processes will be stimulated and developed. I have within me the substance and fiber to solve movement problems which will allow me to build imaginative and creative ideas and to express the things I feel through movement.

Just like all human organisms, there are some days when I feel the tensions and anxieties which are a part of my growing and adapting. Through certain kinds of movement experiences you can help me to relax and relieve these tensions.

You see, there is much within me that is yearning to be uncovered and discovered. I know all the things you can do and I feel that you can be the one to take my hand. I stand often with my back to the sun; turn me around from the darkness so that I may also see the glow and walk into light.

[1] Furth, Hans G. *Piaget and Knowledge: Theoretical Foundations.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1969.

Selected Athletics in a Posture Training Program for the Blind

IRWIN M. SIEGEL, M.D.

Activity needs are indeed as fundamental as the nutritive need. We are provided with a set of complex organic equipment and if it is not allowed to function something happens to us, just as in using it we find joy.

Gardner Murphy, *Human Potentialities**

POSTURE IS a portmanteau word which covers a number of ideas. There is the posture of sitting and standing erect. This is called static posture. There is also the posture of motion. This is called dynamic posture.[1] It is the latter which mostly concerns those who train the blind to travel.

Efficient bipedal locomotion is closely linked with effective binocular perception. The blind, wanting the latter, must rely on the machinery of proprioceptive balance and tactile kinesis to regulate the delicate stability which good posture requires. Techniques aimed at refining this performance should develop sensory awareness and spatial orientation and should best exploit reflex mechanisms for coordination and balance.[2]

Although this can sometimes be achieved through programs of specific exercise training, selected athletics offer more appeal, particularly among children who find the social aspects engaging.[3] For reasons which should be apparent, activities which emphasize self-reliance and independence through individual accomplishment are most desirable. Three sports which do this are ice skating, fencing, and skiing.

Ice Skating

As part of a mobility training program for blind youngsters, ice skating has been found a very effective method for remedying postural fault, developing antigravity musculature, and encouraging balance and coordination. We have noted that the development of ability in this activity runs *pari passu* with improvement in mobility skills. The program of instruction, of necessity, emphasizes equilibrium and graceful movement. When the pupil's feet are lifted from the supporting surface he must balance himself on the thin blades of a pair of skates and is forced to employ reflex postural control to maintain stability.

Skating is taught by the group so that participants are given mutual support (psychological as well as physical). The student is first taught to stand in skates on a rubber mat. He is then shown how to safely fall by tucking in his chin, moving his head forward, folding his hands before him, and falling *backwards*. Instruction follows on the proper method of getting up from the ice by rising from the supine position to the knees, placing one foot underneath and coming up slowly with a hand on one knee.

Next, as skill and confidence are gained, he is taught to balance and glide with a partner. A blind child can gain much skill and independence on the ice while pushing an ordinary light kitchen chair for equilibrium. Using a short pole, such as a broomstick, a sighted partner can maintain contact with his pupil and control direction and speed. Our training program includes having the sighted assistant skate blindfolded part of the time, better to appreciate those problems the blind face on ice. After mastery of basic techniques students move on to advanced movements such as edging, turning, etc

Fencing

Fencing has proved an excellent activity for perfecting good posture and mobility proficiency.[4] This sport, dependent as it is on foot work, postural form,

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* *As quoted in* Movement Behavior and Motor Learning *by Bryant J. Cratty, Lea & Febiger, Philadelphia, 1964.*

the balanced co-contraction of muscle groups, and the expert use of a tactile extension of an active upper extremity, is a natural aid in the solution of alignment fault and in the training of those skills necessary for cane travel.

In instructing the blind it is important to explain the concept of straight forward. The instructor should always stand *in front* of the student and he in turn should always move *toward* the instructor. The use of a slightly elevated platform which vibrates as steps are taken is valuable in transmitting tactile information and keeping the participant constantly aware of his foot work and stability. Each pupil is taught to direct his feet correctly and allow his arm to follow the feet and his body to follow the arm. In this way postural imbalance in the upper extremities can be corrected through good lower extremity reflexes. Pelvic bearing is also emphasized as pelvic position is the keystone of spinal alignment.

Skiing

Currently, many programs initiating the blind to skiing are being conducted. In Europe, Austria particularly,[5] emphasis has been placed on this activity for the nonsighted athlete. The sense of independence in motion with its accompanying physical exhilaration, the intense kinesthetic stimulation which it offers, and the quality of skiing as a social skill all contribute to the appeal of this sport. In addition, skiing is a valuable activity for developing and refining the mechanisms of postural stability. To ski successfully, one must maintain constant equilibrium while in motion. This requires continuous correction of body imbalance through the use of proprioceptive postural regulation.

Prior to training "on the hill," a "dry land" session is desirable. At this time, the student is shown how to handle his boots, mount the ski bindings, and manipulate the ski poles. Balance exercises are performed while on skis. These include bending from the ankles, knees and hips with the poles in proper position. Instruction follows in maintaining stability while lifting the heels and toes of the skis. Next, he is taught to stand and then to glide.

On snow, proper skiing stance is demonstrated by manual positioning. A gently graded slope with a long uncluttered runoff is essential. Each pupil is matched with a professional ski instructor. Children can often ski an easy hill with the instructor touch-balancing from the rear. Later, as ability increases, the student can easily accomplish the same feat solo.

Checking and turning are taught with emphasis placed on sliding and side slipping rather than in the traditional snowplow method. Except in the unusual case, snowplow turns usually lead to crossed ski tips with an inevitable fall. Ultimately a well coordinated blind skier should be able to ski an intermediate trail following the sound track (e.g. attached bell) of a sighted instructor.[6]

During the past year the Vision Foundation for Blind Youth, Chicago, has included ice skating, fencing, and skiing in a program for posture training. These athletics have been integrated into day camp and weekend workshop activities. Eight children enrolled for ice skating, four learned to fence, and five to ski. All students were congenitally blind and ranged from ten to sixteen years of age. With participation, improvement in orientation and mobility were noted in each child. Those taking part not only increased their postural proficiency but their social skills as well. The introduction of this athletic schedule complemented the standard postural exercise, remedial exercise and pre-mobility cane training program of the camp.

Through these methods much can be accomplished. But to do much we cannot do many, at least not at one time. Such programs will never be served in the mass. Where small things matter largely it is in terms of one student's difficulties and then the next that we must think.

Participation in selected athletics can help the blind child develop good habits of dynamic posture and aid him in becoming an effective mobile adult in the sighted world. The great neurophysiologist, C. S. Sherrington once said, " . . . posture follows movement like a shadow, every movement begins in posture and ends in posture."[7] Let us so construe our work that this shadow falls behind our students . . . not upon them.

Note: The author is indebted for the development and description of techniques for training the blind to ice skate, fence, and ski to Mr. Allan Carvell, Mr. Herbert Mayer, and Mr. John Verrey, respectively.

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THE NEW OUTLOOK FOR THE BLIND

programs for handicapped

The Child with Epilepsy

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He will seem just like other children before his first seizure. For a few minutes, he may swing his arms and fall to the floor, rolling his eyes and tossing his body. When he regains consciousness, he may feel somewhat tired but will not remember what happened.

Until now, you may have thought that she was inclined to daydream in school. But suddenly, it seems that her blank stare is something more than lack of attention. And it is, because she has epilepsy. Both of these children are then viewed as *different*. They are set apart, and because of this, more than their seizures, they may not be normal again.

Before the twentieth century, the disorder known as epilepsy was as baffling to the medical profession as it is to an ill-informed public today. Remnants of the shroud of mysticism cling to an era of medical advance and supremacy of the scientific method. Where once there were demons responding to magic, there are now brief periods of altered electrical activity in the nervous system which respond to anti-convulsant medication. While the electroencephalograph and gas liquid chromotography have replaced the exorcist and his talismans, nothing has replaced the public tendency to ostracize the victims of seizures.

Unnecessary over-protectiveness has long promoted the belief that physical exertion is contra-indicated for persons afflicted with convulsive disorders. The notion that illness requires extensive rest is mistakenly applied, as hundreds of thousands of school children are excused from physical education classes. Aspiring athletes are barred from the rigors of training. This exclusion solders more firmly the connection between the affliction of epilepsy and the realization that it severs the individual from his society.

The most crippling effects of epilepsy are not the convulsions themselves, the momentary lapses of consciousness, the apparent daydreaming. They happen when the child wakes up from a seizure to witness that the faces of his teacher and classmates mask confusion and horror. He is assigned to a study hall while his class marches off to gym. He might hurt himself; he does not make the team. Perhaps he no longer even makes friends. He takes his medicine and may rarely or never have a seizure, but he is barred from the peer proving grounds of games, teams, and roughhousing play. Where are the "healthy channels for aggression"? Where is the spirit of fair play and competition?

As medical authorities have estimated that one in 50 school children has seizure disorders, it is probable that in the course of the day a teacher will encounter at least one such child and possibly several. Only a fraction of these may be already known to school health officials. It is probable that the teacher will be the first to notice the signs of a convulsive disorder in the child. The indications are as varied as the forms of epilepsy. They may range from blank staring, rapid blinking, or daydreaming to a sudden collapse with loss of control of the extremities, speech, and bladder functions. In the case of the former, the child may have petit mal epilepsy, or absence seizures. In the latter, the affliction may be either grand mal or psychomotor epilepsy.

As superstitions fade, research replaces the previous explanations of "possession" and madness with observations of temporary changes in the brain waves which indicate the phenomenon of sudden electrical discharge. High fevers and head injuries are sometimes responsible for this weakening of the "seizure threshhold." As efforts were parlayed into establishing control of these seizures, studies ensued which attempted to identify patterns in their frequency and occurrence. It has been noted that sudden immersion into heated water, emotional strain, menstrual periods, or constipation have increased the frequency of seizures in some individuals. In others the presence of an infection, common childhood illnesses, or irregular use of medication have precipitated them. While parents, the school, and even physicians advise against exercise which may lead to fatigue, it is commonly observed that "restricted activity and idleness" produces more seizures than does strenuous exercise. In 1968, the American Medical Association stated that "in many patients, seizures tend to occur mainly during sleep and periods of relative inactivity. They are less apt to occur during periods of physical and mental exertion." Why, then, have we prohibited children with epilepsy from participating in the kind of activity which they may need the most?

Kenneth D. Rose, director of medical research at the University of Nebraska, is currently examining the effects of exercise upon seizure quality and frequency under a grant from the Epilepsy Foundation of America. His findings may dispel certain beliefs concerning hyperventilation. In the past, this forced breathing has been observed to cause seizures in some patients and, indeed, is a common method used in clinical diagnostic procedures. The reason is that it decreases the concentration of dissolved carbon dioxide in the cerebrospinal fluid, producing a decrease in carbonic acid and hydrogen ions. This in turn shifts the acid-base balance in the fluid, stimulating electrical activity in the brain. "In contrast," notes Dr. Rose, "the respiratory acidosis that accompanies physical activity results from an increase in hydrogen ion concentration and has been shown to depress central nervous system activity."

Dr. Rose cites studies in which patients were monitored under conditions of voluntary over-breathing both with and without exercise. It is thought that a change in the metabolism toward acidosis during exercise reduced the electrical activity in the brain, thus retarding seizures. This change in metabolism was evidenced by an increase in the acid Gammaaminobutyric (GABA) levels in the brain. It is therefore probable that while hyperventilation alone may agitate the seizure threshhold, when it is accompanied by physical exercise the effects are quite the opposite. It is too soon to speculate whether physical exercise therapy may become an instrument of seizure control, but this possibility certainly indicates the destructiveness of not permitting a child to exert himself physically.

It is not surprising then, that in addition to the tall pines and gaggle of white ducks walking across a frozen pond, some of the first things a visitor to the National Children's Rehabilitation Center will notice are the shouts and laughter of children at play. The Center, which is supported by the Epilepsy Foundation of America, rambling over hilly fields and margined by woods in Leesburg, Virginia, houses over fifty children with epilepsy who are multiply handicapped. Ranging in age from 7 to 17, these boys and girls enjoy touch football, volleyball, hurdling, track and field, and tennis; some participate in the more sedentary sports of riflery, archery, camping, and woodcraft. Under close supervision, they go swimming in a pool at the edge of the woods in the summer months. Far from being

excused from participating in these activities, these children are often "reached," not in a counselor's office or in a special classroom, but behind the volleyball net, where keeping a ball aloft is a lesson in relating interpersonally. "Often, when they first arrive, these children are 'social isolates,'" explains William J. Kropp, director of group life at the Center. Friendless, many of them tote a string of failures. Due to the combination of emotional problems and epilepsy, they have not adjusted to their homes, schools, and/or communities.

Mr. Kropp explains that there are three noticeable tendencies in these children regarding their attitudes toward their illness: (1) To deny that the disability exists, thereby ignoring the necessary precautions and risking greater danger; (2) To succumb completely to the label of "handicapped," allowing it to rule life; or (3) To utilize the handicap, learning manipulation techniques which will yield the most mileage in terms of freedoms and indulgences. Each of these attitudes is a barrier to normal social adjustment, and each is precipitated by the most formidable problem the children are faced with—confusion. "If parents and teachers have ambiguous feelings concerning a child's disability and the child comes to understand himself in their terms, he eventually will inherit this ambiguity," says William Kropp.

In the Group Life Program (which is part of the four-modality program provided by the Center which also includes medical-neurological treatment, education, and counseling), the task is to assist the child with understanding exactly what the disorder of epilepsy will do to his life. This is not as easy as it sounds. There are no clear answers, no proved plan for circumventing the obstacles. Until more is known about the causes of seizures, little can be said for a life style which would most appropriately handle them. Discovering the real limitations and overcoming the tendencies toward over-indulgence or foolhardiness are the decisive factors for many in learning to accept the disorder. Mr. Kropp likens the patient whose world is colored by epilepsy to the person "who loses his right arm and forgets that he has a left one."

How does a recreation program contribute toward the realization of these goals? Besides possible physical and seizure-control benefits, aspects of exercise are invaluable in psychological development. Learning "the rules of the game," for example, assists the child with controlling his impulses. Team play teaches reciprocity and interdependence. Coaching and practice sessions develop and increase skills which build self-image. Competition is a factor in the formation of certain concepts of self and sexuality. Later in life, these children will not be barred from vicarious participation in spectator sports which are part of their culture—as they would if they were never given the opportunity to learn to appreciate the skills and rules of football, baseball, or basketball.

There are only two activities which are restricted by the Center—tackle football and bicycle riding—although Mr. Kropp has reservations about the latter being universally dangerous for children with epilepsy. He stresses an individual interpretation of the capabilities and limitations of the students, adding that public school teachers should "think in terms of incorporating children with epilepsy into their physical education programs, rather than eliminating them." This includes recognizing that other children may experience anxiety feelings upon witnessing a seizure, which teachers should be sensitive to; it is important to allow them to verbalize their reactions and utilize a seizure's occurrence to educate children concerning handicaps and understanding.

The dated notion that children with epilepsy should be barred from recreation does not recess with summer vaca-

Teacher Tips from the Epilepsy Foundation of America

According to careful estimates, about one in every 50 children has epilepsy. That means there may be a child with epilepsy in one of your classes. You may not be informed that he is subject to seizures, often because the parents themselves are unaware, particularly when the child has the petit mal or psychomotor types of epilepsy.

In general, treat the child with epilepsy as you would any other student; do not pamper him for fear he will have a seizure, do not let him rule the roost, and do not fear or pity him. This is essential if the child is to develop a healthy personality and become a normal, productive member of society.

It is easy to recognize a grand mal seizure. But keep your eye open for repeated occurrences of two or more of the following symptoms happening together and without variation; they may indicate petit mal or psychomotor epilepsy—staring spells ("daydreaming"), tic-like movements, rhythmic movements of the head, purposeless sounds and body movements, head dropping, lack of response, eyes rolling upward, or chewing and swallowing movements. If you suspect that one of your students has epilepsy, consult health personnel for your school. Only a physician, after thorough examination, can state that a person does or does not have the disorder.

Common Types of Seizures

Grand mal—Violent shaking of the entire body accompanied by temporary loss of consciousness. Usually lasts about 2 to 5 minutes. May occur as often as one or more times a day, or as infrequently as once a year.

Petit mal—A simple staring spell (often mistaken for daydreaming). Usually lasts less than a minute, often only several seconds. May occur repeatedly in one hour.

Psychomotor—Inappropriate or purposeless behavior with subsequent amnesia regarding the episode. Usually lasts 2 to 5 minutes, and may occur one or more times weekly, monthly, or annually.

First Aid for Grand Mal Epilepsy

1. Remain calm. Students will assume the same emotional reaction as their teacher. The seizure is painless to the child.

2. Do not try to restrain the child. There is nothing you can do to stop a seizure once it has begun. It must run its course.

3. Clear the area around him so that he does not injure himself on hard or sharp objects. Try not to interfere with his movements in any way.

4. Don't force anything between his teeth. If his mouth is already open, you might place a soft object like a handkerchief between his side teeth.

5. It isn't generally necessary to call a doctor unless the attack is followed almost immediately by another major seizure, or if the seizure lasts more than about ten minutes.

6. When the seizure is over, let the child rest if he needs to.

7. The child's parents and physician should be informed of the seizure.

8. Turn the incident into a learning experience for the entire class. Explain what a seizure is, that it is not contagious, and that it is nothing to be afraid of. Teach understanding for the child—not pity—so that his classmates will continue to accept him as "one of the gang."

tions, but extends to the campsites that operate for children across the country. Summer camps shy away from accepting the handicapped. To provide this valuable experience, the Greater Kansas City Epilepsy League has organized an Epilepsy Resident Camp where children from 9 to 15 enjoy tent living, horseback riding, archery, crafts, hikes, hayrides, and a carnival. They visit the zoo, cluster around campfires, and stage an outdoor theater production. There *are* problems. Many of these young campers have been overprotected at home. Again, they must learn interpersonal skills. In addition, the camp is located on a hilltop in Swope Park (Kansas City, Missouri), tracked with uneven rough footpaths which can present difficulties for those with poor coordination. Precautions must be taken to see that no child has a seizure alone outside. These same precautions—the buddy system—are employed by staff members of the Children's Center in Leesburg. In addition, an R.N. is charged with dispensing maintenance medication which has been prescribed for the campers. But her function is qualitatively the same as that of all summer camp nurses—attending to poison ivy rashes, minor cuts, and burns. Again the question must be asked, *why are these children excluded?*

When the AMA supported physical exercise for convulsive disorders in 1968, they cautioned against participation in contact sports such as football, ice hockey, and lacrosse, noting that the possibility of sustaining head injuries may be hazardous to the person with epilepsy. However, opinion has been varied concerning this. Samuel Livingston, director of the Johns Hopkins Hospital Epilepsy Clinic, states that "to our knowledge, there are no studies reported in the medical literature which prove that chronic head trauma causes a recurrence of preexisting epileptic seizures, and over the past 34 years, we have observed at least 15,000 young children with epilepsy. Hundreds of these patients have played tackle football, some have participated in boxing, lacrosse, wrestling, and other physical activities which render the participant prone to head injuries. We are not cognizant of a single instance of recurrence of epileptic seizures related to head injury in any of these athletes."

Dr. Livingston cautions against such sports as diving and horseback riding, particularly for patients who still have seizures. Any loss of consciousness in a high place could cause a serious or even fatal fall. However, with proper care

in the selection of equipment and appropriate protective gear, there is little to support the practice of excluding persons with convulsive disorders from contact sports. In the case of swimming, extreme care must be taken regarding supervision, particularly for children and persons who have not realized full seizure control. The operation of bicycles in traffic presents the same dangers as the driving of automobiles, which is reserved in some states for those patients who have achieved seizure control.

How does the player with a convulsive disorder affect his team? Hal Lanier, former major league infielder for the San Francisco Giants and later the New York Yankees, replies that his teammates knew about his condition. He expressed the belief that this was to his advantage, "because if I were to have a seizure, they would know what it was, and what to do, and not to get excited about it." It is advisable that the coach and team members be given adequate explanation of epilepsy, enabling them to intervene and provide assistance when one of their teammates has a seizure.

Regardless of the course taken to establish a program of regular exercise for the person with epilepsy, whether it is individual or team oriented, there will always be minor risks. The overriding argument is provided by Dr. Livingston: "They must weigh this against the greater risk of instilling attitudes of inferiority and of being 'different,' which could handicap the child more severely than the convulsions themselves."

Ep 1a

Trampoline Tumbling for Children with Chronic Lung Disease

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Obstructive lung disease is the sum of effects resulting from the fact that the airway at one or more points lacks normal diameters and that, therefore, the to-and-fro movement of tidal volume is variably impeded. The causes of obstruction may be intraluminal (mucus, pus, foreign body), mural (bronchospasm, edema, inflammation), or extrabronchial (vascular or nodal compression). Regardless of its cause, obstruction makes necessary greater than normal inspiratory and expiratory pressures in order to maintain ventilation. Asthma and cystic fibrosis, two common disorders in children, produce prominent and more or less diffuse obstruction, affecting many bronchi and bronchioles.

The trampoline was first introduced to the public in the late 1930s, and in recent years trampoline tumbling has been proved to be a dynamic and stimulating sport. Unfortunately, the trampoline recently seems to have lost its place in physical education and athletic competition. However, it is as popular as ever among children everywhere and the possibilities of its use in special physical education of exceptional children are endless. Interest in trampoline tumbling in movement education is spreading; a number of recent articles document the value of the sport for children with such handicaps as blindness, mental retardation, and learning disabilities.

The Children's Respiratory Health Camp staff at the University of Virginia Children's Rehabilitation Center began an experimental program of trampoline instruction for children with asthma and cystic fibrosis in July and August 1972. The program was a resounding success, though the most rewarding successes were probably psychological.

For beginning any program of instruction in trampoline, a qualified instructor is a must. With qualified instruction, the trampoline is one of the safest of sports; without, it is one of the most potentially dangerous. Children should be taken slowly through a learning progression, beginning with feet bouncing to develop the abdominal, leg, and back muscles. The trampoline is one of the best exercises, were it to be used for this purpose alone. Care must be taken to avoid strained backs, even with simple bouncing, as children with cystic fibrosis and asthma, for example, often have weak abdominal muscles causing lack of body control and stiff-back bouncing.

At this early stage, it is important to emphasize arm movement and body control rather than height. When bouncing, arm movement is forward and upward, as the student leaves the bed, to shoulder height. The arms return to the sides as the body starts down. This type of muscle stretching is useful in adding mobility of the thorax.

From bouncing, one essential psychological reinforcer is the seat drop, easily performed by almost all children. The next logical stunt should be the knee drop, but again caution should be exercised where undeveloped musculature can mean loss of control.

From the knee drop, one can progress to stunts requiring more coordination, such as the front drop. This should be begun from the knees, or have the child perform two stunts successively, such as knee drop to a seat drop, and then vice-versa. Combining stunts not only gives unlimited variety and keeps interest, but is more difficult than performing each stunt individually and hence more challenging. Further progression depends on the child's individual talents; however, the usual progression would be back drop, seat swivel, front swivel, front flip, back flip, and so on.

It is important to remember, however, that the front drop and back drop can have serious effects on a child who has severe chronic lung disease, particularly if he is thin. Often with this group there is a tendency for the chest to become fixed in a distended position with marked increase in the costal angle, and for kyphosis of the spine to become greatly exaggerated. It is a reasonable hypothesis that increasing anatomical deformity correlates with air trapping produced by chronic obstructive lung disease. The trampoline instructor should carefully evaluate the child who has a general "bony" appearance. The child may not have sufficient fatty tissue to pad the body; as a result the shock of the bounce from the front and/or back drop will be very uncomfortable. Thus, the instructor should use this physical assessment as an index for including or excluding advanced stunts.

Children with severe chest deformity and kyphosis should concentrate on learning a few stunts well, such as the feet bounce, seat drop, and knee drop, to strengthen the balance muscles

(particularly the abdominal muscles which are the stabilizers of the trunk and pelvis). In such cases, the feet bounce may prove to be valuable as a postural exercise. At the same time, the instructor can emphasize the value of elementary feet bouncing to general body alignment. It is also important to remember not to push children beyond their capabilities. Generally children are fearful enough, and if pushed they can become terrified of the trampoline and nothing will be accomplished.

Children with respiratory afflictions will breathe heavily, and probably should not continue with trampoline tumbling for more than three or four minutes at a time. Even normal children will breathe heavily after this short span of time. An evaluation of a prophylactic program should include physical activity, and the trampoline is an excellent tool for assessing exercise tolerance. For cystic fibrosis children, physical activity is an aid in preventing the accumulation of secretions in the bronchial tree. The bouncing associated with trampolining helps promote the cough reflex with improvement of drainage of respiratory tract fluid. With asthmatics, the therapeutic value of bouncing is equally good, particularly at the end of expiration to loosen mucus in the bronchioles. However, it is important to remember that the intensity of trampoline tumbling should be limited by the clinical condition of the child. For individuals with limited activity tolerance, dyspnea, or right heart enlargement (often associated with cystic fibrosis), a full trampolining program with intermittent periods of exercise for three to four minutes will often be exhausting, if not hazardous.

Finally, as in any other instruction, exceptional children should be grouped by ability, not necessarily by age. This can be determined by the instructor after one pilot session. Many children with chronic lung disease develop a pattern of suppression of physical exercise that deprives them of initiative and confidence. Trampoline tumbling is beneficial to children both in combating the disease and in improving personality adjustment.

According to Robert Selden, M.D., medical director of Children's Respiratory Health Camp and Cystic Fibrosis Clinic, University of Virginia Hospital:

> The authors make some very important observations about the physical and psychological benefits that may be derived from a well run trampolining program. It has long been recognized that physical activity has a beneficial effect in the removal of excess secretions from the respiratory tract. In a child with cystic fibrosis where so many factors influence the degree of pulmonary health, one cannot easily point to one physical activity more than another in recommending an aid for mucus removal. Certainly the cough and expectoration witnessed here with the up and down bouncing that occurs in trampoline tumbling would suggest that it is an exercise program of some benefit.
>
> In addition, children with handicapping health problems (and chronic pulmonary disease is no exception) are often plagued by a poor self-image engendered in part by the suppression of opportunities for full physical activity. The provision of a broad athletic program including challenges heretofore untried, geared to the child's own potential, can quickly cheer the child, improve his self-image, and often make his peers realize their errors in not including him in their play. Trampoline tumbling is one of the challenges that a child can enjoy.

Recreation and Exercise as Therapy for Autistic Children: The Historical Perspective

MARGARET DEWEY is recreation chairman for the National Society for Autistic Children, Albany, New York 12206.

Therapists who try to help an autistic child must find the multitudes of theories about autism no less confusing than the child seems to find the world around him. The search for the cause or cure continues, but parents and teachers have to deal with the immediate needs of children who cannot be allowed to vegetate while waiting for a breakthrough.

Methods used to reach autistic children are highly intuitive and vary from child to child. Early returns from a questionnaire mailed to parents of the National Society for Autistic Children suggest that recreation and physical activities contribute to better adjustment. At present, this is the best anyone can hope to attain: better today than yesterday, and then better for every tomorrow until the child can live in harmony with people around him.

"Infantile autism" was a term first applied by Leo Kanner to a group of his patients in 1943. The wild boy captured in Aveyron in 1798 has been identified as autistic by such diverse modern theorists as Bruno Bettelheim and the British psychiatrist Lorna Wing. Itard's touching description of the education of this child included the use of relaxation by massage, recreation in natural settings, and strenuous physical chores for exercise. Although Itard himself believed he had failed in his attempt to civilize the boy, the progress he achieved would be awesome by modern standards for any child so handicapped.

Between the wild boy and Kanner's recorded cases must have lived thousands of autistic children, neglected or treated under different diagnostic labels. Some case histories can now be recognized in old medical books under nervous afflictions, mental defect, feeble mindedness, neurasthenia, and early insanity. The doctors whose interpretation of mental handicap a century ago has proved enduring are those who stressed recreation or exercise as an important part of treatment.

Compare a book written by Dr. Brown-Séquard in 1868 with one written by Dr. Blandford in 1871. The former abounds with such suggestions as, "A narrow circular blister applied all around a limb, a toe or a finger, or a circular cauterization with a white hot iron, may cure epilepsy, hysteria, neuralgia, etc., in cases with a distinct aura." Dr. Brown-Séquard's main trust was in drugs, however. Codeine, morphine, opium, chloroform, and ergot of rye were among his remedies. Less soothing for the patients must have been turpentine, strychnine, and arsenic. It is small wonder that he wasted no space extolling the virtues of recreation. Surely his patients were relaxed to the point of stupor, and soon permanently released from the burdens of life.

Dr. Blandford, on the other hand, said of exercise and amusement, "Nothing is of greater importance, not only to the welfare of the chronic but to the cure of recent cases." He suggested riding, cricket, billiards, skittles, backgammon, and bagatelle as suitable amusements for the insane, and pointed out that muscular activities bring sleep, "a sedative more efficacious than drugs." In addition, he stated, "hard exercise can distract one whose thoughts are fixed unceasingly on melancholy subjects." It was his progressive idea that some people called insane are harmless eccentrics who can live contentedly outside asylums. (Today, grown autistic children—those who are not living in institutions under more complex labels—would generally be called eccentric.)

America's movement toward institutional care for mentally defective children began in Massachusetts in 1848. By 1876, the medical officers of "institutions for idiotic and feeble-minded persons" formed an association. Papers read at their meetings stimulated new

ideas, with a decided trend toward more humane attitudes, as these good doctors outdid each other with speeches showing pity and mercy for the helpless. Over the next quarter century the association's proceedings provided a rich source of theory, moving from custodial care to the education of the feeble-minded.

Many articles refer to the therapeutic value of play, music, and exercise. Some are devoted exclusively to this. In 1894, Margaret Bancroft presented a paper claiming mental and physical improvement through gymnastics. Two of her charges who were greatly helped had sensory deficits, a not uncommon finding in autistic children. Luther Gulick outlined in 1899 a physiological rationale for gymnastic exercises for the feeble-minded. He believed that the effort to coordinate muscles places a demand on the nervous system which develops the brain. He described two children, "etiology obscure," whose backwardness seemed to be due to lack of will. (This accusation is frequently made of autistic children, though it is not necessarily true.) Under his gymnastic program, "commencing within their abilities," both cases improved greatly.

In 1894, Dr. Fernald described a group of patients with symptoms often seen in mute autistic children before they have been helped. "The children shrieked and made dreadful noises, tore off and destroyed their clothing, and seemed utterly unmanageable. The attendants were appalled and discouraged."

He described the painstaking training and care which changed them. An important feature was the recreation ground with swings, hammocks, sand piles, shovels, hoes, and carts. The attendants played with the children, rather than simply watching over them. Perhaps by trial and error, two ingenious plans for exercise were devised using circles, which always appeal to autistic children. One was a large round track where the children took long walks, having no corners to confuse or distress them. The other consisted of two stone circles fifty feet apart; in one was placed a pile of cobblestones, and the other was empty. The children, having been shown this difference, amused themselves for hours moving the stones to the empty circle and back again.

Dr. Fernald discovered that these difficult-to-manage children were pleasantly aroused by music and could be induced to march with gradually more complicated steps. He did not feel that they were ready to attempt systems of gymnastics because they had not yet mastered the normal use of the body. Accordingly, he wrote out exercises involving simple movements. Later there were lessons in floor polishing, faucet burnishing, dusting, and sweeping. "Children learn to do these things well who show no interest whatever in the ordinary idealizations of the kindergarten," Dr. Fernald concluded.

A paper by Dr. Milton Barr, delivered in 1899, gives this account of the use of a recreation method to train a boy with similarly violent early behavior. "Always under close custodial care that he might harm neither himself nor others, he would vent his spleen tearing his clothing. His teacher, a woman of rare patience and devotedness, one day sat beside him tearing strips of old linen and laying them in order. 'See, Willie, let us make some pretty strips and lay them so.' His wonder grew at seeing her do what he had been scolded for doing, and at once there was a bond of sympathy. She was playing his game—the only one, poor little fellow, that he was capable of, and he joined in. 'Now we will draw out the pretty threads and lay them in rows.' For weeks the child found quiet pastime in this occupation and his violent nature grew quieter in proportion. One day the teacher said, 'Let us tie the threads together and make a long string.' It took him months to learn to tie those knots, but meanwhile his attendants were having a breathing space. 'Now we will wind this into a pretty ball, and I will cover all you make for the boys to play with.'" This child eventually learned to knit and found happiness making caps for the other children.

Dr. Barr was director of the Elwyn Training School in Pennsylvania. His text on mental defectives presents not only detailed case histories, but photographs of the patients. Here it is possible to observe that many children at Elwyn who showed symptoms of autism, in various degrees of severity, were those without the physical stigmata of other kinds of mental retardation. Surely autistic children at that time would have been sent to institutions for the feeble-minded if they could not be managed at home.

This was not necessarily the end of the road for them, however. The doctor's training included a strong emphasis on music, recreation, crafts, physical education, and vocational training. Some of his children eventually went out into the world, as did C. L., a musical savant who became the leader of an excellent band in Chicago after living 12 years at Elwyn.

How does it happen, then, that Leo Kanner can write in 1971, speaking of the autistic children he first diagnosed, "One cannot help but gain the impression that state hospital admission was tantamount to a life sentence"? Where is the century of progress we have a right to expect? Comparing the eleven adults in Kanner's follow-up study, one is struck with the fact that the two self-supporting men, those who adjusted best, have such recreational interests as golf, bowling, photography, and music. Four others who spent most of their lives in institutions "lost their luster soon after admission—yielded readily to the uninterrupted self-isolation and soon settled down to a life not too remote from a nirvana-like existence." Why have we forgotten the example of such pioneers as Itard, Fernald, and Barr? Public institutions may excuse themselves on economic grounds. It is difficult to locate, let alone afford, such devoted attendants as Willie had.

But there is another reason. We expect more help from science. In a day when few people fill a kerosene lamp for light, we want to illuminate our slow-learning children with the flick of a switch. So far, neither psychotherapy nor chemotherapy has provided the magic answer we seek. In the process of testing we cannot afford to forget therapies which have worked in the past. □

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programs for handicapped

Putt-Putt Golf

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The size of a putting course for the handicapped depends upon a number of factors. It is recommended that at least a 4-hole course be designed to offer a degree of variation in play. The Putt-Putt Golf Courses of America can make available assistance in construction of Putt-Putt courses for the physically handicapped. Write the Association at P.O. Box 5237, 3007 Fort Bragg Road, Fayetteville, North Carolina 28303.

Stroke or medal play—as opposed to hole or match play—is considered the more exacting method of scoring. In some cases, a handicap scoring system can be used to equalize competition. In handicap play, players with low average scores are required to give strokes to high average golfers. Before a handicap system can be used, average scores for each participant must be recorded. In some instances, two practice rounds must be played before a player's score is averaged and his handicap determined. The difference between each player's score determines the number of strokes to be subtracted from the weaker player during competitive play.

Instructors or therapists should always encourage and demonstrate proper game skills. For the sake of a player's pride and accomplishment, direct him in actual skills of the game; do not merely emphasize fun and therapeutic values. Games skills include use of bump boards for bank shots and proper placement of the ball for tee shots. A soft and even stroke usually results in better performances and greater achievement. Descriptions given here are for right-handed golfers and must be reversed for left-handed players.

Ambulatory Players

Concentration and confidence are two primary requirements for good putting. The golfer faces the ball with the weight of his body evenly distributed on both feet; shoulders are over the ball with knees slightly bent. The left arm is close to the body and right forearm close to the right thigh to direct the club head toward the hole. The grip on the club varies greatly with each individual. The backswing is a low pendulum movement; the forward stroke is sharp and crisp with little or no elbow movement.

This 13-year-old boy was diagnosed as having pseudohypertrophic muscular dystrophy at five years of age. He was independent at a wheelchair level, could do level transfers, and was able to do car transfers with a transfer board. There were moderate contractures in his plantar flexors and knee and hip flexors; muscle strength in the hip and knee extensors was poor. His fatigue tolerance was low; putt-putt golf was an ideal outlet for psychosocial stimulation. Note that players in wheelchairs do not go on the greens, but stroke the ball from over the bump boards.

Wheelchair Players

Some wheelchair-bound players prefer to face the putting hole instead of the ball. While this is not encouraged, it may be necessary for some severely involved players to obtain maximum power from the backswing. The wheelchair player with upper-extremity strength can learn to guide the putter by placing his dominant hand low on the shaft. Basically, backward and forward strokes are the same as those for ambulatory golfers.

Program Adjustments for Specific Disabilities

Asthma and/or Chronic Obstructive Lung Disease

Mild exercise is encouraged to focus attention of the disorder away from the individual. A great advantage of putt-putt golf lies in the age range and activity tolerance of those able to participate. Emphysema patients enjoy putting games since they can play at a leisurely pace without aggravating the condition. Breath control can be emphasized for golfers with chronic lung diseases. Players take deep breaths and then exhale just before starting the backswing to relax and aid in chest expansion.

Amputations

Unilateral Upper-Extremity—This group of amputees can play putt-putt golf if hook fingers can be securely attached to the handle and shaft of the putter. The terminal device from the dominant side must be kept low on the shaft to control movement of the club head on a direct line to the hole. This actually may not be recommended if the individual is unable to secure a firm and comfortable grip since loose grip can cause the club head to tilt upon impact with the ball.

Unilateral Lower-Extremity—Loss of a lower limb should not pose any major problems. The putting stance varies with each individual, but usually the feet are kept close together. Some amputees may not be able to secure a comfortable stance; however, they can usually make necessary adjustments by transferring weight to the unaffected side when completing the pendulum swing.

Bilateral Lower-Extremity—Bilateral lower-extremity amputees tend to use a rigid putting stance. Most beginners with above-knee amputations compensate for loss of knee motion by using a wide base. On the other hand, below-knee amputees have a definite advantage because they are able to bend their knees and relax while putting. Many recent lower-limb amputees play from a wheelchair. However, play from an upright position is encouraged once artificial limbs are properly fitted.

Blindness

The totally blind player can make certain adjustments to enable him to participate in putt-putt golf. Players can recognize distances from tee mats to holes through their sense of touch. When distances of putts are accurately judged, golfers are not left with difficult second shots. Blind golfers need to spend considerable time in developing a compact grip and proper stroke. Beginners may have poor kinesthetic

Equipment for Four-Hole Putting Course

Item	Quantity	Unit Price	Total
Tee Mats	4	$ 2.75	$ 11.00
Aluminum Hole Numbers 1-2-3-4 Wing Blocks	4	4.75	19.00
Aluminum Par Markers Wing Blocks	4	4.75	19.00
Stainless Steel Anchor Rods	20	.30	6.00
4½' x 60' Carpet	1 Roll	79.50*	79.50
Carpet Adhesive	5 Gallons	3.00	15.00
Medium Triangle	1	13.00	13.00
Aluminum Bump Boards	900 Feet	.69 (Est.)	62.10
Bumper Fasteners	—	10.00 (Est.)	10.00
Concrete #3000	5½ Yards	18.00/Yd. (Est.)	99.00
Reinforcing Wire	2 Rolls	8.00	16.00
P-2 Putters (35")	10	4.10	41.00
P-3 Putters (32")	10	4.10	41.00
Putting Balls (1 doz. each color)	5 Dozen	3.00	15.00
		Total	$446.60

*A higher grade carpet which should give many years of extra service can be purchased for $112.50 per roll.

awareness skills, and a tendency to turn the club face on the forward swing.

Cardiovascular Disorders

Gradual physical and mental exercise is given in accordance with the physician's order as a patient's condition improves. Game participation may require confinement to a wheelchair until better organic function is achieved. Game values include improving cardiorespiratory efficiency and strengthening self-concepts and self-image. Putt-putt golf is an excellent sport for cardiac patients because it can be played without undue exertion and players can control the pace of the game.

Cerebral Palsy

Game values are dependent upon the extent of motor involvement. Putt-putt golf is not usually recommended for the severe athetoid group since their involuntary motions can interfere with needed precision movements. Many spastic cerebral palsied players may be unable to control voluntary muscles, which can contribute to a jerky putting motion.

Putt-putt golf is a game of concentration and problems of relaxation can have special meaning, especially for cerebral palsied players. Frustrating experiences must be avoided, and players should not be introduced to highly competitive games. Relaxation is a skill which must be learned if purposeful putting motions are to be achieved.

Hemiplegia

Maximum return of neuromuscular function of affected extremities is a paramount goal. Positioning the affected upper limb on the handle of the putter aids in muscle re-education. When assuming the putting stance, the hemiplegic may not be able to distribute his weight equally on both feet due to weakness and involvement in the affected limb. Balance, coordination, and strength can be improved by partial weight bearing activities.

Legg-Perthes Disease and Other Orthopaedic Disorders Involving Hip-Joint Limitations

During the acute stage of the disease a patient, under the supervision of an orthopaedic surgeon, must rest in bed or be confined to a wheelchair. However, play from a wheelchair or in a prone position on a litter is encouraged. Once weight bearing exercises are introduced, therapists or instructors must select physical activities that avoid tension to the hip-joint structure. Putt-putt golf is a safe activity and can be introduced to improve standing tolerance.

Obesity

Most obese golfers are able to adjust to game situations. Beginners often have a tendency to overpower the ball by using a high backswing. Care must be taken to teach the golfer to follow a simple sequence of motion each time he addresses and swings at the ball.

Progressive Muscular Dystrophy and Other Conditions Associated With Hypotonia and Muscular Weakness

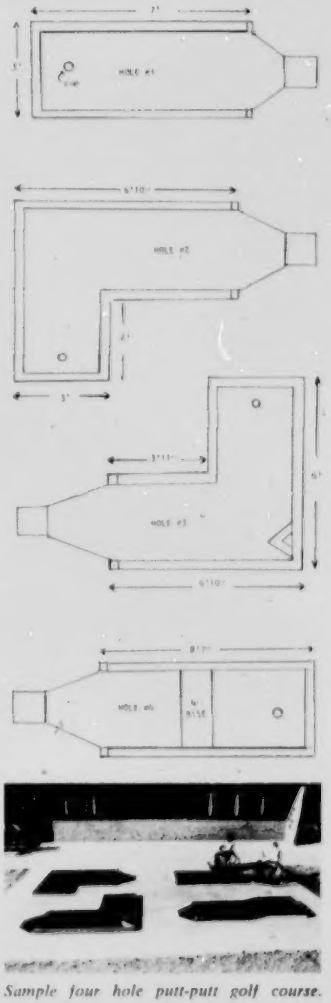
Putt-putt golf is encouraged because persons with progressive muscle disease are unable to engage in vigorous physical activity; their neuromuscular skills are limited and many tire quickly upon slight exertion. Since this group is characterized by weak musculature, most wheelchair-bound players face the hole instead of the ball to develop a more powerful swing. Sitting posture and activity tolerance must be evaluated prior to introducing the sport. In most cases, muscular deficiency is not considered a major defect, unless putting greens are more than 20 feet long.

Quadriplegia

Game proficiency depends upon the level of spinal lesion. Putt-putt golf is not usually encouraged for quadriplegics; the majority are unable to grip the club properly due to loss of voluntary control in the upper limbs.

Rheumatoid Arthritis

The development of putting skills depends upon the extent of joint involvement. However, most players can participate without difficulty since putt-putt golf is a non-strenuous activity. Flexion contractures can cause deformities, so putt-putt golf is contraindicated when joints of the wrists and fingers are swollen and painful. Game



Sample four hole putt-putt golf course.

approaches can be used to improve joint range of motion.

Scoliosis

Bracing is used to lessen the degree of lateral curvature of the spine. Ambulatory players often are confined to a Risser localizer jacket or Milwaukee brace, and are restricted from bending forward to perform the putting motion. Since head movement is restricted, players have to stand away from the tee mat to make eye contact with the ball. Patients confined to litters can also play putt-putt golf with long-handled golf clubs since they must putt from a rigid prone position.

Undernutrition

Putt-putt golf is an ideal sport for those who are underweight. Since it is a single response activity, a player's lack of strength need not interfere with learning putting skills. Brief rest periods may be necessary if fatigue seems excessive or is prolonged. Some players have a weak grip and tend to use a high backswing, which causes poor follow-through with the putter. If the cause of poor putting is related to faulty posture, a period of waiting until strength is gained may be required. The putting motion does not encourage or improve good posture, since players must bend forward at the waist to make eye contact with the ball.

Publications

William H. Edward and Harry A. Schweikert. *What You Should Know About Paraplegia.* Rehabilitation Service Series #70-26. Washington, D.C.: U.S. Department of Health, Education, and Welfare, Social and Rehabilitation Services Administration, 1970. Single copies available free from Division of Rehabilitation Facilities, Social and Rehabilitation Service, Department of Health, Education, and Welfare, Washington, D.C. 20202. Additional copies may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (25¢ per copy with a 25% discount on orders of 100 or more sent to one address).

This booklet was developed in cooperation with the National Paraplegic Foundation and the Paralyzed Veterans' Association. It is intended to help paraplegics, particularly those disadvantaged persons who cannot comprehend the usual educational materials, to gain some basic knowledge and understanding of their disabilities. The booklet will be useful to medical centers and to rehabilitation facilities in the early management of paraplegic patients. In addition, it provides helpful information for students, volunteers, parents, the lay public, and others interested and involved in programs designed for paraplegics.

The *Inter-Clinic Information Bulletin* is published monthly and contains articles related to the prosthetic-orthotic treatment of the orthopedically disabled child as well as notices of meetings, seminars, and special events in this field. In recent issues increasing emphasis has been given to adapted physical and recreational activities dealing with such topics as tumbling, trampolining, horseback riding, archery, and riflery. Indications are that future issues will carry additional articles on different aspects of programing for handicapped in these areas. Subscriptions and single copies are available to organizations and individuals with a bona fide interest in this area. Contact: Editorial Office, Prosthetics and Orthotics, New York University, Post-Graduate Medical School, 317 East 34th Street, New York, New York 10016.

Ropes for Wheelchairs

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Rope is an inexpensive item used in some expensive physical therapy equipment. The use of ropes can lead to an independent, inexpensive learning situation requiring little supervision for some youngsters in wheelchairs.

Ropes can be used in conjunction with weights and a pulley to improve extensor and flexor muscles of the arms and legs. A simple eyelet in a wall with a wooden pin or some other type of weight attached to a rope can give the same effect as the more complicated weight and pulley.

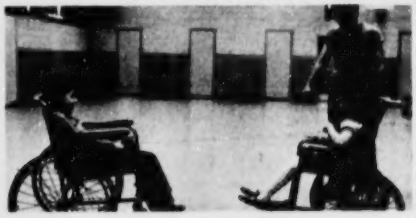
Have two students in wheelchairs face each other with brakes set on one chair to allow the person in the other chair to pull himself toward the stationary wheelchair. This provides a hand-over-hand movement for the youngster in the moving wheelchair and a tension situation for the one in the stationary wheelchair. Activities in which hand-over-hand movements are attempted can be made easier by putting knots one to two inches apart in the rope.

Beginning basic body movements on a mat can be accomplished by having a child in a lying position pull himself toward the instructor. At first the arms do most of the work; more use of the feet should be encouraged. This activity can be done from prone, supine, side, or sitting positions.

Devices for mobility can be used in learning activities. String a rope across the room by which students can pull themselves across. Pick out various objects in the room—door knobs, other wheelchairs, windows, or other stationary objects—and have a student pull himself toward the different objects. This principle can be extended and applied in other situations; place different numbers, colors, shapes, forms, or pictures at various points to make a learning game out of mobility activities. A confidence or obstacle course can be implemented by placing barriers that must be worked around, over, or through.

Another successful activity can be introduced by tying rope to a whiffleball or making a hole in a rubber ball and tying rope to it. A student in a wheelchair can throw or hit the ball with a bat and retrieve the ball easily by means of the rope.

Ropes can provide some movement opportunities for every student, no matter how badly he is afflicted. These activities can promote independence and give each student a chance to grow and develop at his own pace. □



programs for handicapped

Indoor Target Golf

SUSAN J. GROSSE teaches at F. J. Gainslen School, 1301 East Auer Avenue, Milwaukee, Wisconsin 53212.

Golf has come into its own as a sport with many possibilities as a post-high school carry-over leisure-time activity for today's youth. This is as true for the physically handicapped as for the nonhandicapped. Indoor target golf is part of a physical education curriculum devised to provide physically handicapped high school students with knowledge, skills, and enjoyable activities in which they can take part—as participants or spectators—when they leave school. These particular students had little physical education experience prior to their high school years, and at least half came to physical education voluntarily. All were of high school age, 15 to 20 years of age, and included paraplegics, students with congenital arm deformities, cerebral palsied, cardiacs, young people with muscular dystrophy, arthritics, and post-polio cases; some were ambulatory, others partially ambulatory, and some in wheelchairs. This was not a captive audience; innovations, creative and original approaches, and special efforts were needed to create interesting and enjoyable ways for them to learn a variety of meaningful skills in relevant, carry-over, leisure-time, fun activities.

The unit on indoor target golf has also been used with nonhandicapped high school students. Beginners find it especially valuable. Students are kept interested and involved while learning basic skills. They gain a working knowledge of concepts of club face slant, loft, type of swing, and scoring and course terminology before going out on the golf course. Advanced students prefer the challenge offered by the golf course, but find indoor target golf a good rainy-day activity.

Usual approaches and procedures for teaching golf follow a traditional pattern—get students into lines on mats where they remain for an entire class period to learn and practice shots; it's hit and retrieve, hit and retrieve, hit and retrieve! Rules, scoring, and etiquette are taught in discussion groups or by lecture. Members of a lucky class get outside to hit a few practice rounds on the grass. This offered little for these physically handicapped students; it would not motivate them or hold their interest since it would be difficult for them to receive any immediate feedback regarding their progress in attaining these skills; success, much less feelings of success, would be virtually nil. A miniature golf course could not be set up because of limited gymnasium space and no locker room. Something different was needed—indoor target golf was it!

In indoor target golf students apply almost immediately their knowledge of and skill in making various golf shots to practice situations centered around wall targets resembling holes on a golf course.

Equipment

Clubs—at least one regular 3, 5, and 9 iron for every three or four students
Plastic Practice Balls—three per student
Practice Mats—one per student; squares of carpeting or carpet padding work well in lieu of regular mats
Targets—3 x 5-foot sheeting, hemmed so that ends do not ravel, painted with tempera; secure targets to walls with masking or marking tape
Scorecards—regular golf style

Physical Arrangements

- Attach targets so that the bottom edges touch the floor; they may be raised as student skill increases; every student can score when targets touch the floor.
- Leave sufficient distance—at least six feet—between targets for safety reasons and so that students will not interfere with each other.
- Determine number of targets to be used according to available wall space. If space does not permit placing nine different targets, use pitch-and-putt or putting green style—two or more tees for the same target to complete a nine-hole layout.
- Place mats initially about five or six feet from targets for chip and pitch shots.
- Move mats back for shots requiring a full swing.

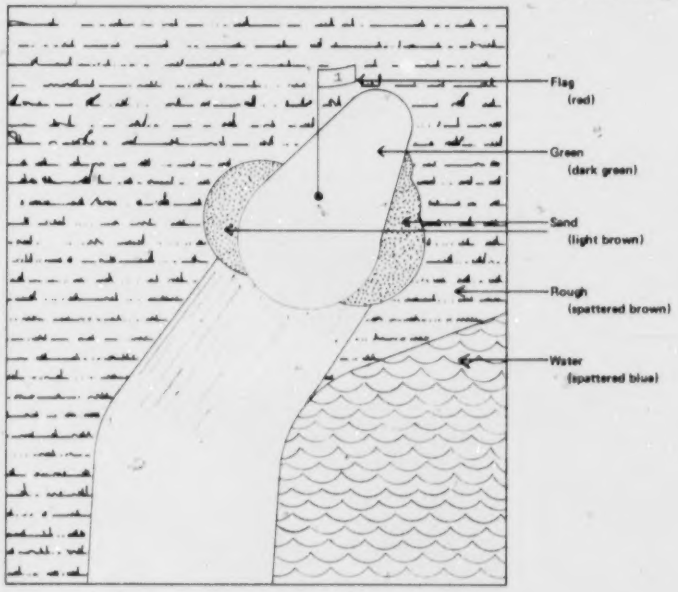
Skills—include grip and stance for

- Chip shot
- Pitch shot
- Fullswing
- Putting

Adaptations mostly concerned the grip on the club; each student, with some guidance from the instructor, made his own adaptations. Wheelchairs had to be stabilized by having students lock the brakes. We had no instances of flying clubs because students could not control them.

Concepts

- Height of the trajectory of the ball is dependent upon the type of club used and the type of shot—chip, pitch, or full swing.
- Direction of the ball is determined by stance and direction of the swing.



Methods

- Provide students with preliminary instruction about such things as equipment, safety rules, layout of a golf course, and basic principles and/or an overview of golf.
- Teach the chip shot—this was the easiest shot for our students to perform and master. Include instruction about grip and stance; explain the mechanics of the shot—how to do it as well as the effects this shot has on the flight of the ball. Practice on mats lined up in the usual manner so that all students can see the instructor who makes corrections easily. Practice on mats after the basics of the shot have been taught; start shooting at targets—but no scoring yet.
- Teach the pitch shot in the same manner as the chip shot—start to score when using targets.
- Teach the full swing.
- Teach putting.

Scoring

- Play the course in groups of two, three, or four—as one student shoots, the *others* spot where his ball hits the target. This is important so that the person hiting will not lift his head to see where his shot lands.
- Give each *golfer* three shots at each target scoring as follows:

Flag or Flagstick	0
Green	1
Fairway	2
Sand	3
Water	4
Rough	5

- Score as in regular golf using a regular score card; establish par for each hole on your own school course or layout.

Safety

- Be sure other players in a group stand in a safe position while the one *up* is hitting.
- Chase balls and rotate from target to target on signal from the instructor.

This activity has several important pluses:

- It can be set up in a rather limited amount of space.
- It provides for practice of various golf shots with different clubs in situations where principles of club choice, ball trajectory, and stance are applied; students can see immediate results in terms of their own golf scores.

We evaluated the progress of our students by observing how well they adapted golf skills and made them functional in terms of their own individual conditions. Each student was encouraged to try and experiment to find the best way for him as an individual to succeed, to achieve, and to attain the desired knowledge about and skills in golf. It was impossible to teach one specific form due to the great variety of conditions which required flexibility; approaches were individualized according to student abilities and disabilities. Application of these skills in a golf setting was stressed. Students were evaluated in terms of their actual scores on the course and a written test at the conclusion of the unit.

Students talked about television golf matches. They would hit a sand trap, or miss a pin by inches, and relate the incident to similar situations from televised matches.

Preparing the targets did take considerable time, but it was time well spent to provide a situation by which physically handicapped students could gain real knowledge about golf. Some of these students will play on regular courses some day; some will play miniature golf; others may only watch golf on television; each of these is a worthwhile leisure-time activity which these students may never have enjoyed had it not been for indoor target golf. □

programs for handicapped

Adapted Sports and Recreation for the Handicapped Child

CHRIS COUSENS is a physical educator at the Matheny School in Peapack, New Jersey 07977.

Adapted physical education can be and often is an integral part of the therapy program for minimally handicapped children. Few, if any, modifications or adaptations must be made when one is dealing with the minimally involved child. It becomes increasingly difficult to incorporate games and group activities for those children with moderate to severe physical limitations. It is difficult to modify these games so that they will not only be of therapeutic value to the child but also allow him to attain success, have fun, and have the experience of group participation along with promoting proper social behaviors and good sportsmanship.

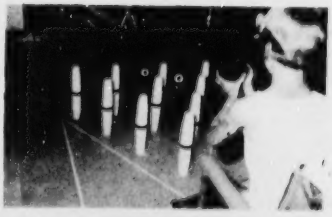
Those involved in treating severely handicapped children might ask themselves such questions as, Is it therapeutically valuable to have such group activities? Is it possible to adapt games to fit the needs of such handicapped children? Is it important to the social, mental, or physical development of the child? Is it worthwhile for physical educators and physical therapists to participate together in planning, organizing, and carrying out group therapy?

This article is concerned mainly with group therapy for the moderately to severely involved cerebral palsied child, but the rationale, adaptations, and conclusions can also apply to various other types of physical handicaps.

Our program at the Matheny School began in September 1971. Two groups were formed with children who had been on individual therapy programs for a considerable length of time. It was felt that these children had plateaued physically on the individual programs and they might now benefit more from a group psysical education situation. This, and the fact that these children needed more mobility, formed the basis for the rationale for this program. The groups were supervised by both a physical therapist and a physical educator. One other group was formed consisting of all boys, who were also on an individual program with a physical therapist. This group was supervised by a physical educator. Due to complex scheduling, which made it impossible to separate the minimally, moderately, and severely involved children, all were together in some groups. Therapeutic exercises were stressed along with pure recreational activities, and children were sometimes given their choice of activity.

The objectives listed here are more than just objectives for the program; they are, in essence, observations noticed by both the therapists and physical educators here at the school.

1. To add a psychological lift to the handicapped individual which can motivate him during his actual therapy time. The program tends to build self-confidence within the individual.
2. To remove the child momentarily from the daily routine of individual therapy and have a chance to really enjoy himself and let himself go.
3. To promote good sportsmanship. How to win and lose graciously is easily demonstrated on the athletic field. Children can learn to communicate with their peers through competition. The child may find that he can do more physically than he thought he could.



4. To teach the handicapped child the rules and value of sports and recreation so that they will be able to appreciate the spirit of competition. Much of their lives will be spent watching or viewing live sporting events, so they should be aware of the rules of the different sports.
5. To give the child a chance to show his physical prowess, however minimal it might be.
6. To give the child the opportunity to be himself. This objective is especially important in the case of boys, as many areas of rehabilitation tend toward less masculine areas of recreation.
7. To help handicapped children realize that they can help other children who may be more handicapped than themselves. The child may also be able to assist the instructor in setting up activities for the other children, giving the child a sense of importance and accomplishment.
8. To allow children the opportunity to choose the activity they would prefer for the period. The children should be allowed to make decisions; this builds confidence.
9. To physically condition the child is important and must be given special consideration. Upper body strength can be improved by many of the adapted activities. Improved strength will help in transfers and ambulation at a later time. Stretching of certain muscle groups can also be of help to the child in improving functional skills.

Adapting Sports and Games

Almost any sport can be adapted to fit the needs and capabilities of the handicapped child. The following sports can be adapted for the minimally to severely involved child.

Football. Football can be played either in the kneeling, all-fours position, or lying on the stomach. The game is played on 4' x 6' mats which can be lined up together. A first down is made by moving the ball forward the width of one mat. Passing is forbidden. Blocking is done by holding the other person or by simply getting in his way. A touchdown is accomplished by getting the ball (sponge type) to the opposite end of the mats. The extra point is made by advancing the ball the width of the last mat in front of the goal. Helmets should be worn, and the children should be well supervised. The game can be played for any period of time, depending on the strength of the participants.

Volleyball. Participants in wheelchairs need assistance in throwing or hitting the ball over the net with their fists.

The net should be lowered according to their capabilities. The receiving team need only touch the ball before it strikes the ground. If no one touches the ball while it is in flight, the other team receives the point. Games are to 15 points and a team must win by at least two points.

Obstacle course. This can be a most enjoyable game for the handicapped child. Children can move either against the clock trying to better their own previous time, or against each other. Occasionally the children should be allowed to construct their own obstacle course under supervision. The course should be constructed so that even the most severely involved child in the group can complete it without too much assistance from the instructor.

Bean bag games. These can improve the child's throwing ability. Throwing at targets or possibly a bean bag war where the children throw the bean bags at each other can be a lot of fun if properly supervised.

Relay races. These can be carried out either from a wheelchair or on mats. Segmental rolling can be stressed, or belly crawling and all-fours crawling with emphasis on reciprocation can be reinforced. When in wheelchairs, the courses can be set up so that the child must weave in and out between various objects.

Bowling. A small alley about 4' x 30' is marked off with masking tape. The rubber ball is approximately 6" in diameter; the plastic bowling pins are about a foot high. The child can remain in his wheelchair and throw underhand or overhand, whichever gives him more success. The child on the floor can sit with his legs out in front and roll the ball from between the legs. The athetoid can often use this method; perhaps it is better for him to slap at the ball in a side swinging manner, as the ball remains stationary. The children can assist the instructor in retrieving the ball and setting up the pins.

Direction games. "Simon says" is a good game to play on the mats to get the children moving and to get them to listen to directions. "Red light, green light" is also a good game when the children are up on their feet or in wheelchairs.

Wrestling. Wrestling is one sport that does not need much adaptation for the cerebral palsied child. The child must be unbraced and should wear a helmet. This is good for promoting movement, but it must be carefully supervised.

Hockey. Hockey can be played with any number of children but six or eight is preferable. There are two goalies who remain in front of their respective goals. Children can be braced, use crutches, or remain in wheelchairs. In order to score, one must move the ball into the opponent's goal by means of the crutches or with the feet. Helmets must be worn by those on crutches or on the floor. The children should be allowed to rest after 5-10 minutes of play.

Outcomes of the Matheny Program

The program at the Matheny School appears to have been a success. The objectives, in general, have been realized. The children, no matter how handicapped, have enjoyed the experience of a group physical education program and have responded positively to all aspects of the program.

Ideally, it is better if children can be grouped as homogeneously as possible, with reference to physical abilities, age, and intelligence. The groups should be kept small in size, making it easier for the instructor to organize and control the activities. Helmets and mats should always be used when the children are on the floor wrestling, playing football, hockey, or other games that can get rough. In many cases it is advisable to have someone assisting the group, especially in lifting children in and out of the wheelchairs, spot checking the insecure children in case of falls, and helping those children who cannot manage the activity by themselves. The minimally involved group may require only one instructor but the more involved groups will need two or more instructors.

Day-to-day progress has been hard to observe because change among the severely involved child often takes a long time to evolve. Over a longer period of time, many of the children became more social, more mobile, and better motivated; some developed finer motor skills needed in the more difficult games and most learned how to accept winning along with losing. Severely involved children did learn to use what little skills they had, not so much to win or lose, but merely to know that they could enjoy themselves recreationally.

Generally speaking, the physical educator is indeed qualified and has the necessary skills to make such a program a success and can certainly become an important asset to a physical therapy department. Supplemented by training from a physical therapist in the more complicated movement patterns of the neuromuscularly involved child, knowledge of the abnormal patterns which need to be inhibited and what muscle groups or actions a particular child must improve in, the physical educator can make the activities more therapeutic in addition to increasing his own knowledge and competency.

In conclusion, it is felt that the questions at the beginning of this article can be answered affirmatively. Cooperation between the therapist and the physical educator can make for a valuable team which can certainly open new outlets for recreational programs among handicapped children. The success of such a program is dependent upon the knowledge, skill, enthusiasm, and creativity of the physical educator himself.

Physical Therapy Suggestions for Gross Motor Activities

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Angels in the snow. This is calisthenics lying down. On most, you will have to move the legs. A regular rhythm should be achieved. Count and have the children count also. This exercise is an in-out pattern. (1) Move the arms. (2) Move the legs. (3) Move the arms and legs. (4) Same sequence on one side; then the other side. (5) Same sequence with one arm and the opposite leg.

Clapping games. Touch body parts, as "clap knees then hands." Increase the complexity by (1) the number of parts in a sequence, (2) number of beats or claps on a given part, or (3) clapping on others or on self and others, as in "pease porridge hot," etc.

Simon says. Most of the children can find their own body parts. Have them sit side-by-side or in a circle and find parts on others. Work on right and left parts while they are sitting side-by-side but not while facing each other.

Passing games. Pass bean bag or ball of rope over the legs then under the legs, over the head then under the head, etc. Do this while in a circle. You can also pass it forward and behind in a relay line up.

Circular turns. Place large hoop on the floor; mark off half and quarter points of the circle on the hoop with contrasting tape for sighted children and textured tape for blind children. (1) Have child kneeling inside the hoop and learn whole, half, and quarter

turns. (2) Have child outside of the hoop and do the same thing. (3) Have child circle around another child. (4) Have children go between each other. (5) Have them learn to weave in front and back of each other; this leads to "London Bridge" and "in and out the window."

Other action games. (1) "Under the spreading chestnut tree" (2) "Itsy-bitsy spider" (3) "Put your right hand in, etc." (4) "Giant steps" (can do rolling crawl, etc., instead, if they can't walk).

Chair turning. Learn to turn a chair in the four quadrants. Teach them how to get into the seat; then teach them to go around a chair in both directions, through them, and between them. Finally, introduce "musical chairs"—first with as many chairs and children as possible.

Scooterboard routes. For sighted children, use colored spots on the floor and hands with contrasting colors for right and left. Follow spots with the hands: forward, backwards, then laterally both ways so that they must cross their hands. Follow obstacle route such as "go straight, under table, right, around the post or wastebasket." Begin with only one or two instructions, then increase the number as they learn to follow more complex instructions. Blind children can play this with guidance.

Ball games. Any kind of ball game with simple rules—throwing to a designated person, bouncing in chalked-off circle, rolls and bats, bowling (tap pins as a cue for the blind children).

Kinesthetic-auditory memory games. Blindfold sighted children and play simple "blind man's bluff"; for example, "Go to the window sill for a prize." With the blind children, use an initial auditory cue; then use intermittent auditory cues such as getting "colder" or "warmer" as needed with blind or sighted.

Auditory location games. For the blind or sighted children (blindfold them) drop object on the floor and have them find it. Then drop two or three items sequentially to increase the memory demand. With the blind, use auditory and tactile cues. With the sighted, use bright or contrasting color cues; they may also benefit from auditory or tactile cues.

Strengthening games. Tug of war; Indian wrestling; Pull self on scooter tied to the parallel bars; Push self away from the parallel bars while on the scooter.

Tournament Bowling, an Activity for the Handicapped

JACOB S. SCHLEICHKORN, formerly executive director of the United Cerebral Palsy Associations of New York State, Inc., is now director of the Program in Physical Therapy, School of Allied Health Professions, State University of New York at Stony Brook, New York 11735. FRANK SIRIANNI is executive director of the United Cerebral Palsy and Handicapped Children's Association of Syracuse, Inc., West Seneca Turnpike, Syracuse, New York 13215.

Bowling for sport and recreation is enjoyed by some 20 million people in the United States every year. How many of these sports enthusiasts are handicapped is unkown, but more and more bowling is becoming an integral part of recreation programs for the disabled. Bowling is a sport that can give the handicapped individual, working with a team, a sense of belonging as well as the hope for accomplishing something that others are doing and enjoying.

For the past twelve years, the United Cerebral Palsy Associations of New York State, Inc., has arranged an annual bowling tournament for those handicapped with cerebral palsy. Each June up to 18 teams have been involved in the exciting event. Any team is welcome to participate, providing all members are cerebral palsied and each player has bowled at least three different times or a minimum of six games with his assigned team; appropriate scores of the players in previous games must be kept for review by the Tournament Committee.

To fully appreciate the planning of a tournament for the disabled one should be aware of several important definitions. Among these are:

Scratch score—a bowler's score from one complete game

Average—a bowler's accumulative scratch score divided by the number of games bowled, usually figured after three or more games of league play

Handicap—extra points or pins given to a bowler to add to his scratch score

The first step in establishing the handicap for each bowler in the tournament is finding the bowler's average.

A volunteer may help the disabled bowler by steadying the ball on the special ramp. Photograph by Henry Schleichkorn.

Second, the tournament chairman selects a score which is higher than the average of any of the disabled bowlers—that is, if some of the bowlers can bowl 120, it is advisable to pick a score of 150. In this way, *each* participant can have a handicap. A bowler's scratch average is subtracted from the arbitrary 150 and he is given 100% of the difference as his handicap. Thus a bowler with an average of 100 has a 50 pin handicap; he is able, by rolling his average game, to achieve a total score of 150. The intent behind this type of percentage handicapping is to give all the bowlers an equal opportunity before the first ball is rolled down the alley.

In the New York Cerebral Palsy Tournaments, rules have been adapted to accommodate those with cerebral palsy. The following are examples of those rules:

All teams must bowl two games.

If a bowler needs assistance to and from the shooting line, the team may provide a helper.

Unless confined to a wheelchair, all players must wear bowling shoes.

Ramps and other special equipment or gadgets are allowed. Any special adaptations or equipment must be supplied by the team.

The excitement leading up to the day of the tournament can only be measured by the active participation of the handicapped individuals in the weeks before the tournament. Everyone involved shares in the excitement of planning for the big day. Arrangements must be made for travel to the

tournament site. Plans must be made for necessary special assistance. The appropriate bowling facility without architectural barriers must be selected to accommodate wheelchairs.

Throughout the tournament competitive spirit runs high. Bowlers are cheered by friends and onlookers. Newspaper and television coverage adds to the importance of the activity.

The involvement of the handicapped does not end with the tabulation of scores at the tournament. Since the program is held in conjunction with the statewide voluntary agency's annual meeting, a presentation ceremony is held at a banquet in the evening. The participation of all teams is encouraged and the winning team receives the spotlight. In addition to the team receiving the State Association trophy, each player on the team also receives a trophy. The high scoring female and male also receive special recognition. Every year the tournament grows and the enthusiasm of the cerebral palsied adults encourages the professional staff and volunteers to plan additional recreational activities.

Many local United Cerebral Palsy associations have sponsored bowling teams; several state associations conduct annual tournaments. In April 1972, interest in bowling among the local affiliates prompted the National United Cerebral Palsy Association to sponsor the first national invitational bowling tournament. (In March 1971 nearly 800 handicapped bowlers were participating in a minimum of 34 active UCP bowling programs across the nation.) The tournament, held in Chicago, drew ten teams from across the country. The pride and self-confidence displayed by the bowlers have resulted in an expanded program this year, with qualifying tourneys in each of six UCP districts. The final competition will be held on April 26-28, 1973 at the national conference in Washington, D.C. (For further information on the tournament, contact Ron Kozusko, Public Relations Department, United Cerebral Palsy Associations, Inc., 66 East 34th Street, New York, N. Y. 10016; telephone 212-889-6655.)

While the tournament has been limited to those with cerebral palsy, all types of handicapped groups can benefit from bowling. The use of devices and adaptations may be necessary, but even the most severely disabled participant can have the pleasure of seeing the bowling ball heading down the alley. Ingenuity is the key word in adapting bowling to meet the needs of the handicapped.

For Further Information

National Wheelchair Athletic Committee, 40-24 62nd Street, Woodside, New York 11377.

United Cerebral Palsy Associations, Inc., 66 East 34th Street, New York, N. Y. 10016. □

RESEARCH

The following list of studies, all completed at the University of Iowa, and the accompanying photographs have been provided by Orrin H. Marx, Supervisor, Physical Education Department, University Hospital School, University of Iowa, Iowa City.

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Meditch, Carl. *Effectiveness of Two Methods of Weight Training for Children with Athetoid Type of Cerebral Palsy.* Master's thesis, 1961.

Soper, George. *A Study of Kinesthetic Sense in Children with Cerebral Palsy.* Master's thesis, 1967.

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programs for handicapped

Physically Handicapped Children Use the Stegel

SUSAN J. GROSSE teaches physical education at F. J. Gaenslen School, 1301 E. Auer Avenue, Milwaukee, Wisconsin 53212.

The Lueneburger Stegel, also known as the All-Purpose Trainer or Lind Climber, is a versatile piece of climbing equipment rapidly achieving popularity in elementary physical education programs. It consists of three poles which may be arranged at several different heights between two sawhorse pieces. A ladder and a slide may be attached to either the poles or horses. Its current popularity stems from the many different ways in which the equipment may be set up as well as the variety of activities which may be performed on it.

One does not usually associate climbing equipment with the physically handicapped. However, the same characteristics that make the stegel valuable for the normal child make it even more valuable for those who are handicapped. Initially it can provide an opportunity for movement for children who are restricted by their handicaps and by people who are afraid to let them participate in physical activity for fear of further damage through accident. Though the potential for accident does exist, it is greatly overweighed by the benefits such activity can provide. Through this movement many other integrities can develop. Muscular strength, coordination, balance, and agility may all be improved. Concepts of body image, spatial awareness, and laterality can be developed and the self-confidence acquired through accomplishment can enhance emotional growth. Performing on the stegel may require more effort for the handicapped child but the rewards are well worth it.

There are essentially two ways of approaching activity on the stegel: from the aspect of movement problem solving and from the aspect of formal gymnastics. Each of these is somewhat dependent upon the part of the equipment used. Therefore, each part of the equipment is considered separately here not only in terms of possible activities but also in light of how a handicapped child can perform the activities.

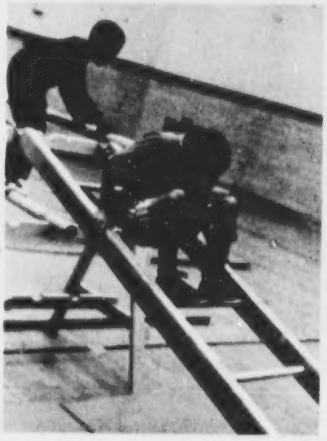
Ladder. Hooked to one horse or a pole it can be used for climbing up and down. A child who can walk, even in braces or on crutches, can walk up the ladder. Children who have weak muscles due to muscular dystrophy, or extreme contracture as in cerebral palsy, can move up the ladder backwards in a sitting position using their hands on the side rails for support. The activity can be varied by not allowing a child to use a particular arm or leg. Suspended between both horses, the ladder can be used for going across either by lying on the stomach and pulling with the arms, crawling, or crawling in and out between the rungs.

Poles. The three poles can be attached to any of the three different levels of the horses. At a variety of settings they can be used for movement problem solving. The child can be asked to go over, under, between, and around various poles. If the problem is set but the child is not told exactly how to do it, he is able to work out a solution at a physical level where he is likely to achieve success. For example, if one pole is set at each of the three levels and the problem is to go over a pole, the child who is usually in a wheelchair can crawl over the low pole while the minimally handicapped child can go over the high pole with a forward roll. Each has solved the problem, each has been successful, and each has had a new movement experience. The problems can be made more challenging if further restrictions on the movement are made by asking that it be done feet first, back to the floor, stomach facing the floor, sidewards, etc.

If two poles are placed parallel to each other at the highest level they can be used as gymnastic parallel bars. Students who have handicaps involving the lower extremities but with intact shoulder girdle functioning can learn many of the regular parallel bar movements.

If one pole is placed at the high level it can be used as a horizontal bar by boys and as a starter bar for beginning uneven parallel bar activities for girls. Many children with minimal handicaps, especially those involving only one lower extremity, can perform quite well in these areas.

Slide. Hooked to either a horse or a pole, the slide provides a great deal of motivation, for children who have to work hard to move around especially enjoy the free, effortless slide down at the end of their work on a problem. It requires no great physical exertion



and can be done in a variety of different ways—on the stomach, back, side, seat, or knees; head first, feet first, or sideways. The more able child in terms of shoulder strength can be asked to crawl up the slide as part of a strength building problem.

Combined pieces. The poles, ladder, and slide can be arranged in any number of ways. With each new arrangement the child can be asked to get from one side or end of the set-up to the other. He may go any way he wishes at first. If the teacher wishes to make the problem harder, additional requirements can be made in terms of activities to be performed during the trip across. For example, "Go across by going over two poles and under one of the poles," or "Get to the other end by going backwards." The possibilities are endless. Each child can achieve success by solving the problem at his own level of mobility.

The key to success is variety—variety in the arrangement of the equipment and variety in the movement of the child. In addition to the problem solving method as a means of achieving different physical responses, the child can also be blindfolded. This eliminates one sense of feedback and forces the child to rely more heavily on others. Most of the problem solving activities done with the eyes open can be done blindfolded.

With any activity, the following safety precautions should be taken when using a stegel.

1. In setting up the equipment be sure that all the bolts are secure. They will work loose with use and as movable parts are exchanged.

2. Use mats, at least two layers deep under the poles, and one layer under the ladder and at the end of the slide. Children in braces may be less capable of adjusting their bodies to take a fall safely, due to the added weight of the braces as well as the weakened or contracted state of the muscles involved. Mats will ensure a safe fall and hence lessen fear of trying again.

3. Use spotting. Encourage the child to accomplish as much on his own as possible. Sometimes this may mean a fall, but children also learn by their mistakes. Spot to make sure it is a safe fall. When in doubt, steady the hips for support. If the child is falling, catch the shoulders to keep him from landing on his head.

4. Let the child move at his own speed. Children with limited experience may need time to think out what they are doing. On the other hand, a frequent occurrence is the enthusiastic child who gets upside down for the first time and lets go. He may need some slowing down next time.

5. Encourage sharing of space. As the children become more capable, several can perform at one time. However, they should be taught to do their own thing without interfering with someone else.

Physically handicapped children can perform on the stegel and can achieve the same benefits in terms of physical mobility and growth in self-esteem through accomplishment that normal children can achieve. However, they need it much more because the possibilities for such achievement are much more limited. Don't let this possibility go to waste; let your physically handicapped children use the stegel.

Photographs on pages 71 and 72 by Toni Vick

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programs for handicapped

Adapted Table Tennis for the Physically Handicapped

Table tennis adapted and modified for the physically handicapped has implications and applicability for use in physical education and recreation programs for young children, the poorly coordinated, those with poor vision, and individuals with poor reactions. It can be a low-organized activity or serve as a lead-up to table tennis itself. Many activities modified to meet the special needs of a given individual or group can be used with other individuals or groups who have similar needs but for quite different reasons. Readers are encouraged to send information about activities and methods they have found useful in their adapted physical education or therapeutic recreation programs.

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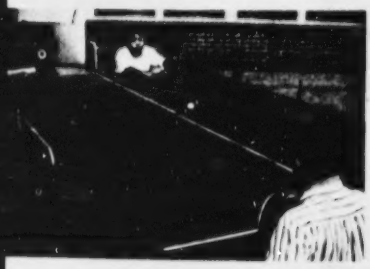
Table tennis can easily be adapted for physically handicapped children and adults, regardless of their affliction. Adapted table tennis can be played by the skilled and the unskilled, the ambulatory and the nonambulatory, the young and the aged, the strong and the weak; even wheelchair and stretcher patients can actively participate. Two or four people can play this modified version of table tennis in which a regulation table tennis ball is hit so that it moves on the surface of the table instead of in the air and over the net as in regular table tennis. Regulation or special rackets are used according to the needs and disabilities of the individual participants. An adapted net, made from string or cord, replaces the regular net. Generally, equipment and rules are modified to slow the game so those with slower reactions and physical limitations can successfully participate.

Play is started by a server who places the ball on the table surface and strikes the ball so it rolls across the table surface on his side of the "net" and passes through the open space in the net to his opponent's court. The receiver returns the ball by striking it so that it passes through the open space in the net and onto his opponent's court. Play continues in this manner until a point is scored when either player (1) hits the ball over the net, (2) hits the ball so that it hits the string and fails to go through to his opponent's side, (3) hits the ball twice in succession, or (4) makes no attempt to hit the ball.



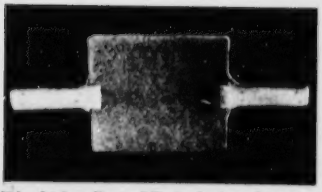
Doubles competition may also be conducted giving more children a chance to participate.

Special scoring systems can be developed according to individual situations. In regulation play, a game is won by the player who first scores fifteen points. However, he must win by two points. The serve changes hands after every dead ball and point.

Certain acts cause the ball to become dead, thus bringing a stop or rest in the action: (1) if the ball is hit by either player so it goes over the side rails and off the table; (2) if the ball is hit by either player so it fails to roll on the playing surface or go through the open space in the net; (3) if the ball is hit in the air by either player so it fails to touch the playing surface or if the ball is hit over the net and fails to touch the table; (4) if a good serve or return is hit in such a way that it is beyond the physical control or ability of the receiver to reach the ball with his paddle; (5) if the ball hits the receiver's hand, arm, or wheelchair without touching the paddle; or (6) if the ball splits or fractures during play.

If a player is severely disabled, the ball may be placed on the playing surface in a favorable position for him to serve successfully. Any time a player attempts to serve and misses the ball he shall be granted a re-serve. However, only one direct paddle hit is allowed in attempting to serve the ball; if the server fails on his first attempt, his opponent becomes the server.

In doubles play each side of the table is divided into two parts by a one-eighth inch white line running parallel to the side lines and equidistant from each side rail. Players of each team take positions beside each other at one end of the table; each player is responsible for his half of the court when hitting the ball. At no time can a player hit a ball that is on his teammate's half of the court; violation of this rule causes a point to be awarded to the opposing team. Players alternate the serve after every dead ball and point scored. All other rules and regulations described for singles play apply in doubles play.



The bi-handle paddle is designed to permit broader and freer movements.

Adaptation for Various Conditions

The cerebral palsied needs slow and patient training if he is to attain purposeful motor movements. These movements must be simple at first; highly coordinated activities cause fatigue and fatigue causes nervous tension. Therefore, the individual must be handled carefully and not rushed too fast in developing table tennis skills. Many spastic cerebral palsied patients should be able to adapt to the game because of its nonrestricted design which slows down the action.

Stretcher cases, including patients with scoliosis and in a body cast, those with dislocated hips or bilateral hip spica and legs in wide abduction, and children with Legg-Perthes disease, can participate in meaningful activity and have fun playing adapted table tennis. High stretchers are the most practical for use in table tennis; players will have a greater range of motion permitting more extensive arm movement from a prone position.

Post-polio, paraplegia, and spina bifida are examples of other conditions for which adapted table tennis can provide activity. Participation is relatively easy for wheelchair patients with good upper extremity use. The game is also an excellent activity for rheumatic fever patients because of its nonstrenuous nature which can be used to build higher levels of exercise tolerance and to reduce fatigue thresholds.

The bi-handle table tennis paddle is designed to permit players broader and freer movements with both hands while playing adapted table tennis. It acts as an assistive device for increasing limited joint movements through proper positioning of the hand and fingers. □

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This is the way fun is going to be.

SKATING SAFETY

Smart Skaters Know It Pays To Follow the Rules

STAY AWAY FROM MOVING VEHICLES

Cars and trucks are many times bigger than you and go much faster than you . . . so never hitch a ride and always stay out of their way.

SKATE ONLY IN SAFE AREAS

Any smooth pavement on playgrounds, sidewalks or your own driveways are safe areas for skating. Play streets are protected against vehicles and are always safe.

USE EXTRA CARE GOING AROUND CORNERS

Always watch where you are going. Don't speed around "blind" corners and hurt someone beside yourself.

LOOK OUT FOR SMALLER CHILDREN

Remember! Children smaller than you cannot skate fast or always get out of your way fast. Be careful skating around them. Never push or shove.

ALWAYS BE POLITE AND COURTEOUS

You are being courteous when you let people pass without delay. After all—they have the first right-of-way.

CAP TAG

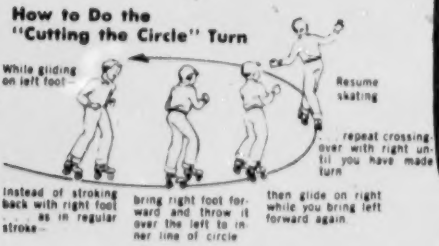
One player is given a cap. The player who is IT chases the player with the cap, trying to tag him before he can pass cap to another player. The player tagged while holding the cap becomes IT. Cap is passed to a third player chosen by the old IT and tag game starts over. A ball or other object may be used in place of cap, if desired.

OBSTACLE RACE

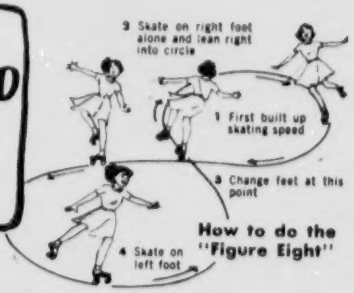
First, draw a course with chalk lines. Place obstacles, such as boxes, baskets, tin cans, bricks, sticks and logs. Place obstacles close together making it hard to skate in between them. Skater who touches any object before the finish line, waits for next turn. Player skating entire course without touching any obstacle wins 10 points. You need 100 points to win game.

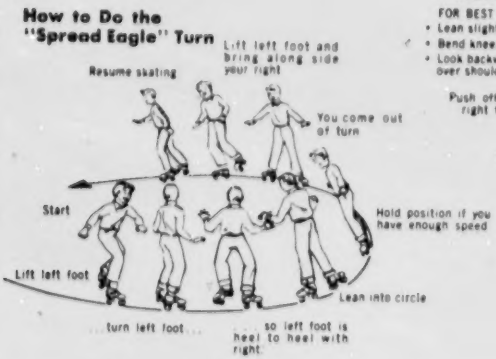
How to Do the Leaning Turn
Resume skating
Keep your arms out for balance
Lean the way you want to turn
Place one foot behind the other like when you stand on a rail

How to Spin
Start the same as in the "Spread Eagle" turn
Shift left foot so it is heel to heel with right
Stand straight and draw legs and arms together
Make your spin circle as small as you can


How to Do the "Cutting the Circle" Turn
While gliding on left foot
Resume skating
repeat crossing over with right until you have made turn
Instead of stroking back with right foot as in regular stroke
bring right foot forward and throw it over the left to inner line of circle
then glide on right while you bring left forward again

TURNS, TRICKS AND SPINS


3 Skate on right foot alone and lean right into circle
1 First built up skating speed
2 Change feet at this point
4 Skate on left foot
How to do the "Figure Eight"


How to Do the "Spread Eagle" Turn
Lift left foot and bring along side your right
Resume skating
You come out of turn
Start
Hold position if you have enough speed
Lift left foot
Lean into circle
turn left foot
so left foot is heel to heel with right

When you learn turns, you can master tricks and spins

How to Skate Backward
FOR BEST FORM
• Lean slightly
• Bend knees
• Look backward over shoulder
Push off with right foot
Push off with left
while
1 Glide backward on left foot.
2 Bring right foot backward and along left
3 You glide on your right
4 Bring left foot alongside and continue as in Figure Two

Jumping on skates is very much like jumping without skates. First, build up speed, then crouch just before you jump. Push up with your legs, lifting yourself into the air. Bend knees as in Figure 4 while you are making jump. Land squarely on both skates and resume skating.

WOOD TAG

A player who touches wood of any kind—a tree—a fence—or a house—is "on base" and safe from being tagged by IT. Players should not stay "on base" too long, but should keep moving to give IT a chance to make a tag. Players can also use other objects for being "safe on base" such as lamp posts, curbing stones, metals or bricks.

JAPANESE TAG

This game brings extra fun and laughs. When a player is tagged by IT, he in turn becomes IT. He chases the other players, but he must keep a hand on that part of his body which was tagged. If tagged on his shoulder, he must keep a hand on his shoulder until he tags someone else.

FOLLOW THE LEADER

Choose a leader. Every one must skate wherever the leader skates. Leader should figure out interesting and unusual places to lead the group. Leader can skip, jump, spin, and skate over obstacle courses. For added fun, each skater takes a secure hold on skater in front and everyone does what the leader does.

CROSS TAG

Start game with IT chasing another player to tag him. Any of the other players may cross in front of IT. When a player does cross in front of IT, this player must then be chased by IT until tagged or saved by another player who crosses between him and IT. IT must then change direction and chase the new crossing player. When a player is tagged, he becomes the new IT.